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November 6, 2019

VIA ELECTRONIC FILING

Ms. Kimberley A. Campbell, Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
Raleigh, North Carolina 27603

Re: *Docket No. E-22, Sub 562*
Docket No. E-22, Sub 566

Dear Ms. Campbell:

Enclosed on behalf of Virginia Electric Power Company, d/b/a Dominion Energy North Carolina, is Dominion Energy North Carolina's *Proposed Order Regarding Contested Issue of Recovery of Coal Combustion Residuals Environmental Compliance Costs*, for filing in the above-referenced proceeding. I have also provided a Word copy of the Proposed Order to briefs@ncuc.net.

If you have any questions regarding this filing, please do not hesitate to call me. Thank you for your assistance with this matter.

Very truly yours,

/s/Mary Lynne Grigg

MLG:asm

Enclosure

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-22, SUB 562
DOCKET NO. E-22, SUB 566

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-22, SUB 562 In the Matter of Application of Dominion Energy North Carolina for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina **DOCKET NO. E-22, SUB 566** In the Matter of Petition of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina for an Accounting Order to Defer Certain Capital and Operating Costs Associated with Greensville County Combined Cycle Addition	PROPOSED ORDER OF VIRGINIA ELECTRIC AND POWER COMPANY, D/B/A DOMINION ENERGY NORTH CAROLINA REGARDING CONTESTED ISSUE OF RECOVERY OF COAL COMBUSTION RESIDUALS ENVIRONMENTAL COMPLIANCE COSTS

HEARD: Tuesday, July 30, 2019, at 7:00 p.m., Halifax County Historical Courthouse, 357 Ferrell Lane, Halifax, North Carolina

Wednesday, July 31, 2019, at 7:00 p.m., Martin County Courthouse, 305 E. Main Street, Williamston, North Carolina

Wednesday, August 7, 2019, at 7:00 p.m., Dare County Courthouse, 962 Marshall C Collins Drive, Manteo, North Carolina

Monday, September 23, 2019, at 2:00 p.m., Tuesday, September 24, 2019, at 9:00 a.m., and Wednesday, September 25, 2019, at 9:30 a.m., in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Chair Charlotte A. Mitchell, Presiding
Commissioner ToNola D. Brown-Bland
Commissioner Lyons Gray
Commissioner Daniel G. Clodfelter

APPEARANCES:

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BY THE COMMISSION: On February 27, 2019, pursuant to Commission Rule R1-17(a), Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (DENC or the Company) filed a Notice of Intent to File a General Rate Application in Docket No. E-22, Sub 562.

PROCEDURAL HISTORY

On March 1, 2019, Carolina Industrial Group for Fair Utility Rates I (CIGFUR) filed a Petition to Intervene. The Petition was granted by the Commission on March 7, 2019.

On March 25, 2019, Nucor-Steel-Hertford (Nucor) filed a Petition to Intervene. The Petition was granted by the Commission on March 29, 2019.

On March 29, 2019, DENC filed an application in Docket No. E-22, Sub 562 for a general rate increase, pursuant to N.C. Gen. Stat. §§ 62-133 and 62-134 and Commission Rule R1-17 (Application), along with a Rate Case Information Report Commission Form E-1 (Form E-1) and the direct testimony and exhibits of Mark D. Mitchell – Vice President, Generation Construction, Richard M. Davis – Director of Corporate Finance and Assistant Treasurer, Robert B. Hevert – Managing Partner at ScottMadden, Inc., Bobby E. McGuire

– Director, Electric Transmission Project Development & Execution, Bruce E. Petrie – Manager of Generation System Planning, Jason E. Williams – Director of Environmental Services, Paul M. McLeod – Regulatory Specialist, Robert E. Miller – Regulatory Analyst, and Paul B. Haynes – Directors of Regulation. Also on March 29, 2019, in Docket No. E-22, Sub 566, DENC filed an application to defer the post-in-service financing costs, depreciation expense, property taxes and non-fuel operation and maintenance expenses associated with its Greensville County Combined Cycle Station.

On April 18, 2019, DENC made an errata filing.

On April 29, 2019, the Commission issued an Order Declaring General Rate Case and Suspending Rates.

On May 2, 2019, the Commission issued its Order Consolidating Dockets, which consolidated this general rate case with DENC's pending petition for deferral accounting authority to defer post-in-service costs associated with commercial operations of the Greensville Power Station in Docket No. E-22, Sub 566.

On May 30, 2019, the Commission issued an Order Scheduling Investigation and Hearings, Establishing Intervention and Testimony Due Dates and Discovery Deadlines and Requiring Public Notice.

On May 31, 2019, the Commission issued an errata order.

On August 5, 2019, DENC filed supplemental direct testimony and exhibits of Witnesses Davis, McLeod, Miller, Haynes, Petrie, and Deanna R. Kesler, supplemental Form E-1 items and supplemental Commission Rule R1-17 information.

On August 14, 2019, DENC filed additional supplemental direct testimony and exhibits of Witness Haynes.

On August 15, 2019, DENC filed its proof of notice.

On August 23, 2019, the Public Staff filed the testimony and exhibits of Sonja R. Johnson – Accountant, David M. Williamson – Engineer, Jack L. Floyd – Utilities Engineer, Michelle M. Boswell – Staff Accountant, Tommy C. Williamson – Utilities Engineer, Roxie McCullar – Consultant at William Dunkel and Associates, Dr. J. Randall Woolridge – Consultant, Jeff T. Thomas – Engineer, Michael C. Maness – Director of the Accounting Division, and Jay B. Lucas – Engineer. On the same date, Nucor filed the testimony and exhibits of Paul J. Wielgus and Jacob M. Thomas and CIGFUR filed the testimony and exhibits of Nicholas Phillips, Jr.

On August 27, 2019, the North Carolina Office of the Attorney General (AGO) filed a Notice of Intervention.

On August 28, 2019, the Commission issued an Order Requesting Additional Information.

On September 10, 2019, DENC filed a Motion for Extension of Time to file its rebuttal testimony. The Motion was granted by the Commission on September 11, 2019.

On September 12, 2019, DENC filed second supplemental direct testimony and exhibits of Witness McLeod, supplemental Form E-1 items and supplemental Commission Rule R1-17 information.

Also on September 12, 2019, DENC filed the rebuttal testimony and exhibits of Witnesses Davis, Hevert, McLeod, Miller, Haynes, and Williams.

On September 16, 2019, the Commission issued an Order Providing Notice of Commission Questions.

Also on September 16, 2019, DENC filed its Witness List.

On September 17, 2019, DENC filed an Agreement and Stipulation of Partial Settlement. Also on September 17, 2019, the Public Staff filed Partial Settlement Joint Testimony of Witnesses Johnson and James S. McLawhorn – Director, Electric Division, and DENC filed testimony in support of the Agreement and Stipulation of Partial Settlement of Witnesses Davis, Hevert, McLeod, Miller and Haynes.

On September 18, 2019, the Public Staff filed Supplemental Testimony of Witness Maness.

On September 19, 2019, DENC, the Public Staff, and CIGFUR filed motions to excuse witnesses. The motions were granted on September 23, 2019.

On September 23, 2019, DENC filed an Agreement and Stipulation of Settlement with CIGFUR. Also on September 23, 2019, DENC filed a Revised Witness List and Late Filed Exhibits in response to the Commission's Order Providing Notice of Commission Questions.

The public hearings were held as scheduled. The following public witnesses appeared and testified:

Halifax: Tony Burnette, Dean Knight, Chuck Overton, and Silverleen Alston.

Williamston: John Liddick, Patrick Flynn, Tommy Bowen, James Wiggins, and Glenda Barnes.

Manteo: Rhett White, Manny Medeiros, John Windley, and Brad Bernard.

Raleigh: No public witnesses appeared.

The matter came on for evidentiary hearing on September 23, 2019. DENC presented the testimony of Witnesses Mitchell, Davis, Hevert, McLeod, Haynes, Miller, and Williams. The testimony and exhibits of DENC Witnesses McGuire, Kessler, and

Petrie were stipulated into the record. The testimony and exhibits of Nucor Witnesses Thomas and Wielgus were stipulated into the record. The testimony and exhibits of CIGFUR Witness Phillips were stipulated into the record. The Public Staff presented the testimony of Witnesses Maness, Johnson, Woolridge, and McLawhorn. The testimony and exhibits of Public Staff Witnesses, Williamson, Floyd, Boswell, Williamson, McCullar, and Thomas were stipulated into the record.

The pre-filed testimony of those witnesses who testified at the evidentiary hearing, as well as all other witnesses filing testimony in this docket, was copied into the record as if given orally from the stand, and their pre-filed exhibits were admitted into evidence.

The Public Staff and DENC filed Late-Filed Exhibits and responses to Commission questions on September 23, 2019, September 26, 2019, September 27, 2019, October 1, 2019, October 2, 2019, October 7, 2019, October 8, 2019, and October 23, 2019.

Proposed orders were filed by the parties on November 6, 2019.

Various filings made and orders issued in this proceeding are not discussed in this order but are included in the record of this proceeding.

Based on the entire record in this proceeding, the Commission now makes the following:

FINDINGS OF FACT

Jurisdiction

1. Virginia Electric and Power Company (VEPCO) is duly organized as a public utility operating under the laws of the State of North Carolina as Dominion Energy North Carolina and is subject to the jurisdiction of the North Carolina Utilities Commission. DENC is engaged in the business of generating, transmitting distributing, and selling electric power and energy to the public in North Carolina for compensation.

DENC is an unincorporated division of VEPCO and has its office and principal place of business in Richmond, Virginia. VEPCO is a wholly-owned subsidiary of Dominion Energy, Inc. (DEI).

2. The Commission has jurisdiction over the rates and charges, rate schedules, classifications, and practices of public utilities operating in North Carolina, including DENC, under Chapter 62 of the General Statutes of North Carolina.

3. DENC is lawfully before the Commission based upon its application for a general increase in its retail rates pursuant to N.C. Gen. Stat. §§ 62-133, 62-133.2, 62-134, and 62-135 and Commission Rule R1-17.

4. The appropriate test period for use in this proceeding is the 12 months ended December 31, 2018 adjusted for certain known changes in revenue, expenses, and rate base through June 30, 2019.

The Application

5. In summary, by its general rate case Application, supporting testimony and exhibits filed on March 29, 2019, in this docket, DENC sought an increase in its non-fuel base rates and charges to its North Carolina retail customers of approximately $27 million, along with other relief, including cost deferrals and changes to its rate design. The Application was based upon a requested rate of return on common equity (ROE) of 10.75%, an embedded long-term debt cost of 4.451%, and DENC's actual capital structure of 53.006% common equity and 46.99% long-term debt, as of December 31, 2018.

6. DENC submitted evidence in this case with respect to revenue, expenses, and rate base using a test period consisting of the 12 months ended December 31, 2018, adjusted for certain known charges in revenue, expenses, and rate base.

Coal Combustion Residual (CCR) Cost Recovery

7. Accounting Standard Codification (ASC) 410 (formerly Statement of Financial Accounting Standard No. 143) established financial reporting guidelines for the recognition and measurement of legally enforceable retirement obligations for long-lived assets (ARO). In Docket No. E-22, Sub 420, the Commission issued an order authorizing the Company to utilize regulatory asset and liability accounts to defer the financial impacts associated with ASC 410, and that the implementation of ASC 410 shall have no impact on the ultimate amount of costs recovered from its North Carolina jurisdictional customers, subject to future orders of the Commission. Further, the Commission found in the Company's 2016 Rate Case that the treatment of ARO costs incurred after June 30, 2016 in connection with compliance with federal and state environmental requirements regarding coal combustion residuals (CCR) shall be reviewed in a future rate case.

8. DENC is subject to legal requirements relating to its management of CCR. These legal requirements mandate the closure or retrofitting of CCR surface impoundments and landfills at all of the Company's coal-fired power plants in Virginia and West Virginia. Since its last rate case, DENC has incurred significant costs to comply with these legal requirements.

9. On a North Carolina retail jurisdiction basis, the actual CCR compliance costs DENC has incurred during the period from July 1, 2016 through June 30, 2019 amount to $21.8 million. DENC is eligible to recover these CCR compliance costs. The

actual CCR compliance expenses incurred by DENC are known and measurable, reasonable and prudent, and used and useful in the provision of service to the Company's customers. Further, DENC proposes that these costs be amortized over a five-year period and that it earn a return on the unamortized balance. The five-year amortization period proposed by the Company is appropriate and reasonable and should be approved and allowed within the discretion of the Commission.

10. It is reasonable and appropriate to add a return based on the net-of-tax overall cost of capital approved in DENC's last general rate case to the amount of deferred coal ash costs, as approved in this proceeding, for the period through the effective date of rates approved in this proceeding.

11. It is reasonable and appropriate to use a mid-month cash flow convention for calculation of the return on the principal amount of deferred CCR expenditures. Compounding should take place annually at the beginning of January of each year.

12. DENC expects to incur substantial costs related to CCR in future years. It is just and reasonable to allow deferral of those costs, with a return at the net-of-tax overall cost of capital approved in this Order during the deferral period. Ratemaking treatment of such costs will be addressed in future rate cases.

13. Further, it is appropriate for DENC to record its July 1, 2019 and future CCR costs in a deferral account until its next general rate case. No intervenor presented direct evidence disputing the Company's continued authority to defer CCR compliance costs.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1-4

The evidence supporting these findings of fact and conclusions is contained in the Company's verified Application and Form E-1, the testimony and exhibits of the witnesses, and the entire record in this proceeding. These findings and conclusions are informational, procedural, and jurisdictional in nature, and are not contested by any party.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 5-6

The evidence supporting these findings of fact and conclusions is contained in the Stipulation, the Company's verified Application and Form E-1, the testimony and exhibits of the witnesses, and the entire record in this proceeding.

On March 29, 2019, DENC filed its Application and initial direct testimony and exhibits seeking an increase in its non-fuel base rates and charges to its North Carolina retail customers of approximately $27 million, along with other relief, including cost deferrals and changes to its rate design. The Application was based upon a requested rate of return on common equity (ROE) of 10.75%, an embedded long-term debt cost of 4.451%, and DENC's actual capital structure of 53.006% common equity and 46.99% long-term debt, as of December 31, 2018.

Company Witness Mitchell testified that one of the drivers for the Company's requested rate increase was additional costs that the Company has incurred to comply with environmental regulations since its last rate case in 2016 in Docket No. E-22, Sub 532 (2016 DENC Rate Case). (Tr. Vol. 4 at 170.) Specifically, the Company's coal-fired plants are subject to the federal CCR Rule, which requires the Company to close or retrofit its CCR surface impoundments and landfills. (*Id*. at 175-76.) Witness Mitchell testified that the Company is focused on making prudent investments in critical infrastructure and operating efficiency to meet its customers' need for safe, reliable, cost-

effective, and environmentally responsible electric utility service. He testified that approval of the Company's requested rate increase will allow it to meet its public service obligation to its North Carolina customers. (*Id*. at 186-87.)

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 7-13

The evidence supporting these findings and conclusions is contained in the Stipulation, the Company's verified Application and Form E-1, and the testimony and exhibits of the following expert witnesses: DENC Witnesses Williams, McLeod, and Mitchell; and Public Staff Witnesses Lucas and Maness.

The testimony and exhibits regarding DENC's CCR costs are voluminous. The Commission has carefully considered all of the evidence and the record as a whole. However, the Commission has not attempted to recount every statement of every witness. Rather, the following is a complete summary of the evidence that is in the record.

Likewise, the Commission has read and fully considered the parties' post-hearing briefs. However, the Commission has not in this order expressly addressed every contention advanced or authority cited in the briefs.

Coal-fired power plants have played a predominant role in electricity generation throughout DENC's history, and the Company is dependent upon coal-fired generation today. With coal-fired generation comes a byproduct – coal ash, also known as coal combustion residuals, or CCR. At least since the 1950s, standard industry practice, particularly in the Southeastern United States, has been reliance on coal ash basins. Such basins were constructed and used at many of the Company's coal-fired generating units.

The United States Environmental Protection Agency (EPA) has studied CCR and their proper management and handling since the 1980s, but the agency only began

moving forward on comprehensive regulation of CCR within the last ten years. In 2010, the EPA issued proposed rules regarding CCR. The EPA's final rule—the Coal Combustion Residuals Rule (CCR Rule)—was published in the Federal Register on April 17, 2015. The CCR Rule was incorporated into Virginia's solid waste management regulations in December 2015. West Virginia has not incorporated the CCR Rule into its regulations; however, DENC's lone coal-fired plant in West Virginia, Mt. Storm, is subject to the requirements of the CCR Rule. The CCR Rule introduced new requirements for the management of CCR. DENC, of course, must comply with these new requirements, which mandate closure or retrofitting of the Company's CCR basins[1] and establish monitoring and reporting requirements for the Company's CCR basins and landfills. The CCR Rule's requirements, specifically the requirement to close its CCR basins, triggers Generally Accepted Accounting Principles (GAAP) provisions relating to the retirement of long-lived tangible assets, and specifically triggers the requirement that the Company account for compliance costs through ARO accounting. In the 2016 DENC Rate Case, this Commission granted DENC continuing authority to establish a regulatory asset account and to defer the Company's CCR expenditures incurred after June 30, 2016 for consideration in a future rate case proceeding. Accordingly, consistent with the Commission's Order and as required by GAAP, the Company established an ARO with respect to its coal ash basins and deferred the impacts of its GAAP-mandated ARO accounting. In the instant proceeding, the Company now seeks recovery of the unexpected and extraordinary costs expended in response to the CCR Rule. More specifically, the Company seeks to recover the actual CCR closure costs it incurred from

[1] Throughout this Order, the term "basin" is interchangeable with the terms "surface impoundment", "impoundment" or "pond" when referring to the wet storage of CCR.

July 1, 2016 through June 30, 2019, totaling $21.8 million, to be amortized over a five-year period.

The Commission, as it has in prior rate orders, provides a review of the applicable legal principles, to provide a framework for the application of those principles to the facts of this particular case. *See, e.g.*, 2013 DEC Rate Order, pp. 23-28 (in Duke Energy Carolinas 2013 Rate Case, Commission provided an extensive review of the "governing principles" regarding rate of return). For purposes of assessing the Company's CCR closure costs recovery proposal, the applicable principles include (1) the general cost recovery framework and the role of the revenue requirement in that framework; (2) principles underlying "reasonable and prudent" costs; (3) principles underlying the concept of "used and useful," and (4) a discussion of the burden of proof, and, in particular, presumptions and the distinction between the burden of production (borne by Intervenors) and the ultimate burden of persuasion (borne by the Company).

In the recently decided Duke Energy Progress, LLC (DEP) and Duke Energy Carolinas, LLC (DEC) rate cases (Docket Nos. E-2, Sub 1142 (2018 DEP Rate Case) and E-7, Sub 1146 (2018 DEC Rate Case), respectively), the Commission's decision summarized cost recovery based upon these principles, and found that for cost recovery the utility must prove that the costs it seeks to recover are "(1) 'known and measurable'; (2) 'reasonable and prudent'; and (3) 'used and useful' in the provision of service to customers." 2018 DEP Rate Order, p. 143; *see also* 2018 DEC Rate Order, p. 209.

The Public Staff was the only intervenor in this case challenging the inclusion of the Company's CCR expenses in rates. The sole argument raised by the Public Staff was that cost recovery should be shared by both shareholders and customers. The Public Staff

did not allege that the Company's CCR expenses were (1) unknown and immeasurable, (2) unreasonable or imprudent, (3) or not used and useful in the provision of service to customers.

Summary of the Evidence

A. Costs Sought for Recovery

In his direct testimony, Company Witness Mitchell testified that DENC is requesting recovery of CCR compliance expenses incurred from July 1, 2016 through June 30, 2019. (Tr. Vol. 4 at 176.) The compliance costs for that period are estimated to be $390.4 million. (*Id*.)

Company Witness McLeod explained that the Company's proposed revenue requirement in this proceeding includes a recovery of expenditures made during the period of July 1, 2016 through June 30, 2019 in continued compliance with federal and state environmental regulations associated with managing CCR at seven of DENC's generating stations. (*Id*. at 27.) As Witness McLeod explained, pursuant to the 2016 Rate Order, the Company was permitted to recover CCR ARO-related cash expenditures incurred through June 30, 2016 over a five-year amortization period and to defer subsequent costs to be evaluated for recovery in future rate cases.[2] In his supplemental testimony, Witness McLeod updated the amount of CCR costs sought for recovery during the period of July 1, 2016 through June 30, 2019 to reflect actual cash expenditures and the associated financing costs. (*Id*. at 313.) The Company is proposing to recover $377 million in system-level asset retirement obligation activities. In total, the Company is

[2] 2016 Rate Order at 63; 149.

seeking recovery of $21.8 million.[3] (Tr. Vol. 6 at 686.) The Company originally proposed to recover these expenses over a three-year amortization period (Tr. Vol. 4 at 27), but modified that proposal to a five-year amortization period, consistent with the Commission's treatment of similar deferred CCR costs in the recent DEP and DEC rate cases. (Tr. Vol. 6 at 687.) Witness McLeod explained that the unamortized CCR ARO regulatory asset balance is included in the working capital section of rate base, which provides for recovery of financing costs associated with investor-supplied funds until they are recovered from customers. (*Id.*)

B. Company Direct Case: Coal Ash Overview

The Company offered the direct testimony of Witness Williams to describe the federal and state regulatory requirements that drove the CCR expenditures incurred from July 1, 2016 through June 30, 2019. Witness Williams explained that, as the Director, Environmental Services for Dominion Energy, it was his responsibility to oversee the corporate waste, water and biology programs. (Tr. Vol. 5 at 77.) Relevant to this case, Witness Williams' responsibilities included providing environmental support and leadership to the CCR closure projects. (*Id*. at 94.)

Witness Williams described his education and experience. He testified that he was a licensed Professional Geologist and earned a Bachelor of Science degree in geology from Radford University in 2001. Prior to joining Dominion Energy, Witness Williams worked as an environmental manager at Waste Management Inc., North America's largest waste company, where he was responsible for environmental

[3] The $21.8 million consists of the North Carolina jurisdictional portion of $376.7 million, or $19.2 million plus financing costs of $2.7 million, based upon the proposed three-year amortization period. (Tr. Vol. 6 at 663, n. 1.)

permitting and compliance for thirteen landfills located in Virginia, Maryland, Delaware, and West Virginia as well as over thirty trucking and transfer facilities located throughout the mid-Atlantic. Witness Williams was employed by the United States Navy, where he was responsible for the management and oversight of all east coast Marine Corps environmental remediation projects, including coal ash landfills, debris landfills, and many petroleum or chemical release sites. Witness Williams was also employed by the Virginia Department of Environmental Quality (VA DEQ), where he served as the solid waste permitting coordinator responsible for establishing the permitting standards for landfills, including ash and other industrial landfills. In his role with VA DEQ, Witness Williams also lead VA DEQ's revision of the Virginia coal combustion byproduct regulations, which governed the use of coal ash as structural fill before EPA's issuance of the CCR Rule. (*Id*. at 94-95.)

Witness Williams explained that the CCR costs are attributable to eight Company facilities that are required to close onsite ash basins or other coal ash storage areas under federal and state regulations. Those facilities are: Bremo Power Station (Bremo) Chesapeake Power Station (Chesapeake), Chesterfield Power Station (Chesterfield), Clover Power Station (Clover), Mount Storm Power Station (Mt. Storm), Possum Point Power Station (Possum Point), Virginia City Hybrid Energy Center (Virginia City), and Yorktown Power Station (Yorktown). The coal ash stored at these facilities is the byproduct of decades of efficient and reliable energy generation for the Company's customers. (*Id*. at 78.)

Witness Williams testified that the Company is required to close its CCR surface impoundments, or ash ponds, and eventually its CCR landfills at these eight sites because

of the CCR Rule that was published by EPA on April 17, 2015. The CCR Rule finalized national regulations that provided a comprehensive set of requirements for the disposal of CCR from coal-fired power plants. The CCR Rule established technical requirements for CCR landfills and surface impoundments under Subtitle D of the Resource Conservation and Recovery Act (RCRA). These regulations address location restrictions, operating and design criteria (including dam safety and stability), closure and post-closure care, and groundwater monitoring and corrective action requirements for CCR surface impoundments. The CCR Rule also sets out recordkeeping and public reporting requirements. (*Id*. at 79.)

Under the CCR Rule, the Company had two options for closing its CCR surface impoundments: closure in place or removal. For closure in place, the ash basin would be dewatered and then capped with an impervious cover. For closure by removal, the ash basin would be dewatered, then the ash would be excavated and placed in a lined, permitted CCR landfill. The CCR Rule also allowed excavated CCR to be beneficially reused under certain conditions. (*Id.* at 80.)

Witness Williams also described additional changes to federal regulations that impacted DENC's coal-fired facilities. On September 30, 2015, EPA finalized the Effluent Limitation Guidelines (ELG) rules revising the regulations for the Steam Electric Power Generating category (40 CFR Part 423). The rule set new federal limits on multiple metals found in wastewater that may be discharged from power stations including a prohibition on discharges associated with bottom ash management systems. (*Id*.)

To meet the requirements of the CCR Rule, Witness Williams testified that the Company developed closure plans for each of its CCR ponds and landfills.[4] Witness Williams explained that the Company's original closure plans for its CCR surface impoundments, which were located at Bremo, Chesapeake, Chesterfield, and Possum Point, ultimately called for closure in place. The Company's original closure plans for those facilities remained effective until March 2019, when the Governor of Virginia signed into law Senate Bill 1355 (SB 1355). SB 1355 mandated that the Company excavate its CCR impoundments located in the Chesapeake Bay Watershed, which include the ash basins at Bremo, Chesapeake, Chesterfield, and Possum Point. Excavated ash must be beneficially reused or placed in lined landfills located onsite or offsite. DENC will also be required to recycle or beneficiate approximately 25% of the excavated CCR, if it is determined through additional studies to be economically feasible. Witness Williams explained that Virginia's new excavation requirement is consistent with actions other states and utilities are taking in North Carolina, South Carolina, Georgia, and Alabama. (*Id*. at 81-83.)

Witness Williams clarified that SB 1355 has not affected the costs that are the subject of this proceeding. When compared to closing all ponds in place, the Virginia legislation requirements will result in an increase of the cost of closure. The Virginia closure requirements allow multiple options for removal to onsite or offsite landfills as well as establishing a reasonable recycling target to limit that increase. In addition, closure in place comes with the uncertainty of future operations and maintenance,

[4] As required by the CCR Rule, DENC published its closure plans on its public website: www.dominionenergy.com/ccr.

including corrective action for groundwater. The Virginia legislation removes this uncertainty by establishing removal as the only closure method. (*Id*. at 93.)

Witness Williams discussed that DENC has historically managed CCR consistent with evolving industry standard practices and regulatory requirements. Over time, the utility industry and DENC has primarily used two types of disposal methods for managing CCR: surface impoundments for sluiced CCR and landfills for dry CCR. As of 1988, for example, 80% of CCR generated by the utility industry was stored in surface impoundments or landfills. DENC has also sought opportunities to find beneficial uses for CCR, including use as an ingredient in concrete and dry wall. By 2012, 40% of the CCR being generated was beneficially reused while the remaining 60% was being stored in CCR impoundments and landfills. Since the 1990s, DENC has recycled an annual average of 500,000 tons of CCR for beneficial reuse in the concrete and drywall industries. (*Id.* at 84-85.)

Witness Williams then provided a historical summary of CCR management at each of the Company's eight coal-fired facilities and further described the CCR Rule compliance activities that occurred from July 1, 2016 through June 30, 2019 for which DENC was seeking recovery in this case. He further testified that the Company's actions to comply with the federal and state requirements have been reasonable and prudent. (Tr. Vol. 5 at 93.) He also noted that no witness in this case has challenged or recommended disallowances related to the Company's strategy and activities described below to comply with the CCR Rule. (*Id*. at 165.)

Bremo

Bremo was commissioned in 1931 as a coal-fired power station. CCR management consisted of sluicing wet fly and bottom ash to three onsite ash ponds - the East, West, and North ponds. The East Ash Pond (EAP) was constructed in multiple stages, beginning in the 1930s. (*Id*. at 86.) The EAP stopped receiving CCR in the mid-1980s and became inactive consistent with the regulations at the time. (*Id.* at 118-19.) The West Ash Pond (WAP) was constructed in the late 1970s. The North Ash Pond (NAP) was constructed in two phases in 1982 and 1983. The NAP and WAP ponds continued to receive CCR until the Company converted the station to natural gas in 2014. (*Id*. at 86.) That process involved sluicing ash directly to the WAP; the ash was then hydraulically dredged to the NAP as needed to make room in the WAP. (*Id*. at 120-21.)

The EAP and WAP at Bremo were considered "inactive" ash ponds under the CCR Rule. As such, DENC proceeded expeditiously to close the inactive ponds at Bremo by consolidating the EAP and WAP into the NAP - the largest pond and the pond located furthest from waterways. Since April 20, 2015, ash from the East and West Ponds was excavated and consolidated in the North Pond. The consolidation activities continued through March 2019. DENC could not proceed further with closing the NAP because of the permitting moratoriums created by SB 1398 and SB 807 that were passed by the Virginia General Assembly in 2017 and 2018, respectively. (*Id*. at 90.)

Chesapeake

Chesapeake was commissioned in 1953 as a coal-fired power station and continued to operate until December 31, 2014. All CCR from Chesapeake was originally

managed in a single, onsite ash pond. (*Id*. at 87.) In the early 1970s, the generating units at the site were converted to burn oil. However, the Company returned to burning coal at Chesapeake in the 1980s. By this point, EPA had passed the Clean Air Act (CAA), which imposed substantial improvements to the air pollution control equipment for new coal-fired units. In order to comply with the CAA, the Company installed pneumatic fly ash management and constructed a landfill permitted by VA DEQ on top of the historic ash pond to handle the dry fly ash. (*Id*. at 140.) Bottom ash has been sluiced to a separate bottom ash pond. Both the landfill and bottom ash pond are located within the footprint of the original ash pond. The coal-fired generation units at Chesapeake ceased operations on December 31, 2014, and have been decommissioned. (*Id.* at 87.)

On November 13, 2018, DENC signed a Memorandum of Agreement (MOA) with the Commonwealth of Virginia pursuant to which the Company agreed to groundwater monitoring and closure steps for coal ash at the facility consistent with the standards imposed by CCR Rule regulations. The bottom ash pond is the only portion of the Chesapeake ash complex subject to the CCR Rule. However, this pond was constructed on top of the historic ash pond without a liner system. The adjacent landfill (also constructed on top of the historic ash pond) is subject to a VA DEQ solid waste permit that requires groundwater monitoring of the entire ash complex. Therefore, although the historical pond and landfill are not subject to the CCR Rule, there is no way to distinguish groundwater from the bottom ash pond from that which is in contact with the historic ash pond. As such, the MOA was agreed to in order to ensure that the closure and monitoring of the historic ash pond and adjacent landfill will be consistent with the CCR Rule. All three of the ash facilities (original ash pond, landfill, and bottom ash

pond) are slated for closure once necessary permits are obtained. Only minor closure activities have occurred within the Chesapeake ash facility. Between October 16, 2017 and March 9, 2018, a small amount of ash was removed from the bottom ash pond for recycling. However, with the passage of SB 807 all further removal activities were halted until such time as a path forward was directed by the Virginia General Assembly. (*Id*. at 90-91.)

Chesterfield

Chesterfield was commissioned in 1944 as a coal-fired power station. Sluiced fly ash and bottom ash at Chesterfield was originally managed in the Lower Ash Pond (LAP) and Upper Ash Pond (UAP) where it was wet sluiced from the station. The LAP was constructed in two phases in 1964 and 1967-1968. The UAP was constructed in 1985 to receive sluiced ash from the station and dredged ash from the LAP. The station ceased sluicing ash in 2017 when the facility converted to dry ash management. Flue gas desulfurization (FGD) solids have been generated at the site since 2008 as a byproduct from scrubbers used to clean air emissions. The FGD sludge is primarily composed of calcium sulfate or gypsum, which is beneficially reused as wallboard quality gypsum. (*Id.* at 86-87.)

The CCR Rule required that DENC close both the UAP and LAP at Chesterfield. The Company has continued to operate coal-fired units at Chesterfield as a coal-fired station. To comply with EPA's CCR and ELG Rules, Chesterfield underwent a number of wastewater and environmental improvements in 2017 to transition from wet sluicing coal ash to a dry ash management system. In order to manage the dry coal ash, DENC constructed an onsite, permitted landfill. The onsite landfill has received dry ash since

2017. The Company began the process of closing the LAP and UAP pursuant to federal and state requirements. (*Id.* at 90.)

Clover

Clover was commissioned in 1995 as a coal-fired power station. The station has operated a dry fly and bottom ash system since it began to generate power. CCR has been taken to an onsite landfill for disposal, which is divided into three areas, or stages. Two landfill stages reached their maximum storage capacity in April 2003 and were subsequently closed in compliance with VA DEQ regulations. Since 2003, dry fly ash and bottom ash has been stored in Stage III of the landfill. Clover also has two sedimentation basins used for settling wastewater solids, including FGD, prior to removal and disposal to the landfill. The water from these ponds is recirculated and FGD wastewater is not discharged. These ponds have been in place and operated since 1995. (*Id*. at 88.)

Under the CCR Rule, DENC was required to close both FGD basins at Clover. CCR were removed from the FGD basins, and those basins have been retrofitted with a CCR Rule compliant liner. DENC maintained compliance with its state permits and other CCR Rule requirements related to its CCR units at the site. The removal of the first sedimentation basin began in 2017, and its replacement meeting the requirements of the CCR Rule was placed into service in 2018. The second sedimentation basin was removed and construction was scheduled to be completed by June 2019. (*Id*. at 92.)

Mt. Storm

Mt. Storm is located in Bismarck, West Virginia and is part of DENC's operating system. Mt. Storm was first commissioned in 1965 and continues to operate as a coal-

fired power station. Dry fly ash and bottom ash are stored in the onsite lined Phase B landfill that is permitted by the West Virginia Department of Environmental Protection (WV DEP). The FGD sludge from Mt. Storm is beneficially reused in mine reclamation projects to neutralize mine acid runoff and in the manufacturing of Portland cement. Excess FGD sludge is disposed of in the onsite lined Phase A landfill. (*Id*. at 88.)

Mt. Storm historically managed ash contact water from the ash loading area and bottom ash hydro-bins in five small low volume waste treatment ponds (Pyrite Pond and Ponds A, B, C, and D). These ponds did not meet the liner standards of the CCR Rule but were needed for continued operation of the station. Therefore, the five original ponds were closed by removal and disposed in the onsite Phase B landfill. The station then constructed a new pyrite pond and two low-volume wastewater treatment ponds in the location of the former ponds. The onsite landfills (Phase A and B landfills) and their liners met the definition of an active landfill and, as such, were allowed to continue to operate under the CCR Rule. The closure of these ponds and construction of the new ponds meeting the requirements of the CCR Rule began in early 2016. The majority of the removal and construction was completed in 2018. Construction of the final pond's concrete liner was scheduled to be completed in Spring 2019. DENC continued to maintain compliance with its state permits and CCR Rule requirements related to its CCR units at the site. (*Id*. at 92-93.)

Possum Point

Possum Point was commissioned in 1948 as a coal-fired station. CCR management involved sluicing wet fly and wet bottom ash to five onsite ash ponds. These ponds were named Ash Ponds A, B, C, D, and E. Ponds A, B, and C are

contiguous and were used as water treatment ponds to settle and manage low-volume wastewaters containing CCR from approximately 1955 to 1967. (*Id.* at 85.) The A, B, C ponds were in an inactive state and covered in vegetation until compliance activities under the CCR Rule began in 2016. (*Id.* at 103-04.) When the ponds were closed in 1967, there were no applicable capping or closure standards. (*Id*. at 104.) The original Pond D was constructed in the early 1960s before Ponds A, B, and C reached capacity and received CCR until 1971. The Company completed construction on a new Pond E in 1968. In 1986, Pond E was nearing capacity, so the Company began construction on a new Pond D embankment to provide additional onsite storage space. The new Pond D was constructed with a 12" thick clay liner system. Ponds D and E continued to accept ash until the station's coal units were converted to natural gas in 2003. (*Id.* at 85-86.) After 2003, Pond E continued to receive low-volume wastewaters until CCR Rule compliance activities began. (*Id*. at 109.)

The CCR Rule included provisions for "inactive" ash ponds that no longer received CCR after October 14, 2015. Ash ponds meeting the definition of "inactive" were recommended to close within three years or otherwise be subject to long-term monitoring and other costly provisions of the CCR Rule. DENC's ash ponds at Possum Point qualified as "inactive" under the CCR Rule. Accordingly, DENC proceeded expeditiously to close the inactive ponds at Possum Point by consolidating Ponds A, B, C, and E into Pond D - the largest pond at this site, which is also the furthest from waterways and the only pond at Possum Point with a liner. In 2018, DENC completed the excavation of ash from Ponds A, B, C, and E. DENC could not proceed further with closing Pond D because of the permitting moratoriums created by SB 1398 and SB 807

that were passed by the Virginia General Assembly in 2017 and 2018, respectively. (*Id*. at 89.)

Virginia City

Virginia City was commissioned in 2012. All fly ash and bottom ash from the station is collected from the power station and moved by truck to the lined, onsite Curley Hollow CCR landfill. The landfill has a state of the art design including a synthetic liner and leachate collection/treatment systems. (*Id*. at 87.)

Beginning in May 2016, DENC began installing additional wells and monitoring groundwater at Virginia City to comply with the CCR Rule. DENC is required to monitor these wells semi-annually. DENC continued to maintain compliance with its state permits and CCR Rule requirements related to its CCR units at the site. (*Id*. at 91.)

Yorktown

Yorktown began operation in 1957. Similar to Chesapeake, the Company converted its coal-fired units to oil and then converted them back to burn coal in the 1980s. (*Id*. at 141.) In 1985, DENC constructed a lined ash landfill on an adjacent parcel of property owned by DENC. Since that time, the dry fly ash and bottom ash has been loaded on trucks and hauled to the adjacent CCR landfill. The Yorktown CCR landfill is permitted by the VA DEQ and is equipped with a bottom liner and leachate collection and treatment systems. (*Id*. at 87.)

The Company permanently closed over 60% of the landfill in 2017, and the remainder of the landfill will be permanently closed in 2019. (*Id*.)

C. The Public Staff's Equitable Sharing Proposal: Testimony of Witnesses Lucas and Maness

Public Staff Witness Lucas listed three conceptual options for regulatory treatment of DENC's coal ash costs. The first option, advocated by DENC, would be to treat CCR-related costs as required for compliance with new state laws and the CCR Rule and, therefore, as reasonable to recover in rates. A second option according to the Public Staff would be to conclude that the CCR Rule and Virginia legislation were a direct consequence of environmental impacts caused by the historical CCR management practices of DENC, and that DENC should bear responsibility for the full costs. A third option, the option advanced by the Public Staff, would be to share costs between DENC's customers and DENC's shareholders. (Tr. Vol. 6 at 183-84.)

Witness Lucas testified that the Public Staff supports the third option because determining cost responsibility for environmental impacts is complex and must account for the following factors: (1) some impacts are not clearly imprudent or unreasonable; (2) estimating historic costs to remediate environmental impacts would be speculative; and (3) the incomplete historical records of DENC and the challenge of reconstructing all the Company's decision-making on CCR management make it difficult, if not impossible, to conduct a prudence review. Witness Lucas referred to Witness Maness's testimony for a description of how the equitable sharing should be implemented and the reasons for it. Under these circumstances where DENC's historical CCR disposal practices have led to actual environmental contamination impacts, Witness Lucas believes that some degree of equitable sharing is appropriate. (*Id*. at 184-85.)

In support of his opinion, Witness Lucas summarized the federal regulatory framework preceding and following the CCR Rule that applied to DENC's surface

impoundments and landfills. (*Id*. at 113-19; 121-23; 130-31.) He also summarized the surface water, groundwater, and solid waste laws and regulations in Virginia and West Virginia that have also applied to the Company's surface impoundments and landfills. (*Id*. at 119-21; 123-30.) Witness Lucas also summarized state and federal legal actions against the Company relating to CCR; however, he did not argue that these lawsuits were suggestive of any wrongdoing by the Company or environmental problems. (*Id*. at 131-36.) Witness Lucas concluded that the nature and extent of coal ash environmental problems at the Company's sites, as evidenced by the number of exceedances of applicable groundwater standards, showed that DENC had a great deal of culpability for its compliance costs related to CCR impoundment closures, whereas customers were not culpable at all for those costs. (*Id*. at 185-86.) Witness Lucas noted that the equitable sharing recommendation is not based on the imprudence standard, which he argued would result in a 100% disallowance of a discrete, imprudent cost, but instead is based in part on DENC's culpability for failure to comply in some instances with environmental regulations for protection of groundwater and surface water. (*Id*. at 113.)

Witness Lucas, citing testimony offered by the Public Staff's engineer Charles Junis in Docket No. E-7, Sub 1146, argued that there was a growing awareness and evolving scientific knowledge concerning and acknowledging the risks of environmental contamination resulting from storing CCR in unlined impoundments and the feasibility of alternative methods of coal ash management. (*Id*. at 140-41.) He testified that, by the early 1980s, the electric generating industry knew or should have known that the wet storage of CCR in unlined surface impoundments was detrimental to the quality of surrounding groundwater and surface water. It was also the Public Staff's opinion that

industry leaders, prior to the recent nationwide trend towards development, strengthening, and enforcement of regulations for storage and disposal of CCR, were at least partly responsible for setting the "industry standard" for waste disposal, which they cite for past decisions regarding coal ash management. He testified that DENC, Duke Energy, and their predecessors in North Carolina, Virginia, and West Virginia, were industry leaders that failed to improve and modernize their practices despite the available knowledge described in his testimony above. He stated that publications from 1979 and later warned of the risks of CCR constituents leaching into groundwater from unlined storage ponds, and DENC and other utilities should have installed comprehensive groundwater monitoring well networks to determine if the risk was materializing at their ash ponds. (*Id*. at 141-44.)

While DENC began groundwater monitoring at certain impoundments in the 1980s, Witness Lucas noted that the Company did not begin groundwater monitoring at other impoundments, like the ABC Ponds at Possum Point, until 2016. (*Id*. at 175.) He testified that since DENC began monitoring groundwater near its CCR impoundments at the direction of environmental regulators, there has been evidence of degradation of the natural groundwater quality. He concluded that beginning as early as the 1980s, the Company had specific knowledge of groundwater contamination from CCR. He asserted that this finding of degradation is further supported by the continued groundwater monitoring and annual reports required by VA DEQ, and more recently, the monitoring required by the CCR Rule. (*Id*. at 181.)

Witness Lucas testified that site investigations and/or regularly scheduled monitoring events at DENC's sites have shown evidence of degradation of the natural

groundwater quality as a result of the coal ash disposal practices. (*Id*. at 163.) He cited investigations and reports from 1986 through 2004 relating to Possum Point (*id*. at 145-57), a 2003 report relating to Chesapeake (*id*. at 157-59), a 2007 report relating to Chesterfield (*id.* at 159-61), and a 2011 report relating to Yorktown (*id*. at 162), to demonstrate the Company's historical knowledge of groundwater impacts relating to its on-site CCR storage facilities. He also cited a 1990 report discussing groundwater impacts that were discovered in the 1980s from an off-site disposal site, Chisman Creek, which was used by a Company contractor to dispose of some of the Company's CCR. (*Id*. at 162-63.) He asserted that unanswered questions remain about what the Company knew or did not know regarding CCR contamination because the Company did not provide more reports from before 2000 and because the Public Staff had difficulty obtaining information from the Company during discovery. (*Id*. at 163; 168-74.) Therefore, he concluded that the Company was not able to demonstrate, with the records available, that it fully accounted for and mitigated the risks of CCR contamination in prior decades of CCR disposal and management. (*Id*. at 165.)

Witness Lucas suggested that those information gaps could be filled by persons at the Company with firsthand knowledge of historical CCR management decisions. However, he concluded that those individuals were no longer employees of the Company. He testified that, while Company Witness Williams appeared to be knowledgeable about the Company's CCR Rule compliance decisions and current operations, Witness Williams did not appear to have sufficient knowledge concerning past decisions regarding monitoring and remediation of coal ash sites. (*Id*. at 165-67.)

Witness Lucas testified that DENC had a duty to comply with state groundwater standards without regard to whether it followed accepted industry practices. He noted that DENC was an industry leader with the ability to influence what those practices were at the time. He explained that Virginia groundwater regulations were enacted in the 1970s and have an "anti-degradation policy" to protect state water quality. He also explained that West Virginia groundwater regulations were enacted in the 1990s and also have an "anti-degradation policy" to protect state water quality. He concluded that DENC created the risk of coal ash contamination; their original disposal of CCR has led to actual environmental contamination in several instances; their original disposal of CCR poses an ongoing contamination risk that requires expensive remediation in the judgment of the EPA and the Virginia legislature; and, customers will not receive any additional electric service for this costly remediation. Public Staff Witness Maness stated that some degree of equitable sharing is appropriate in this circumstance, and equitable sharing has been ruled lawful. (*Id*. at 185.)

Witness Lucas argued that the Commission should not follow its decision from the 2016 DENC Rate Case. Pursuant to a stipulation between the Company and the Public Staff, the Commission allowed the Company full recovery of its CCR costs. He explained that the Public Staff received vastly more information regarding the Company's CCR management and groundwater contamination than it did in 2016. He also noted that the costs in the 2016 Rate Case were much less in magnitude than in this case and that was a factor the Public Staff considered in its recommendation for equitable sharing in this case. (*Id*. at 187.) He also explained why the Public Staff was recommending a different sharing allocation from its cost sharing in the 2018 DEP and

DEC Rate Cases. The Public Staff determined that DENC had less "culpability" than DEP or DEC because (1) DENC has not been found guilty of criminal negligence for its environmental impacts; (2) DENC has not had significant state regulatory enforcement actions taken against it; and (3) while there are widespread environmental impacts, especially groundwater contamination, there is less evidence, at this point, of the extent of the impacts than was present in the DEP and DEC rate cases. (*Id*. at 188-89.)

For his part, Public Staff Witness Maness identified three adjustments to the Company's proposed recovery of coal ash costs: (1) calculation of the return between July 1, 2016 and June 30, 2019, using annual compounding, rather than monthly compounding; (2) amortization of the balance of the deferred coal ash expenditures over a 19-year period, rather than the 3-year period originally proposed by the Company; and (3) reversal of the Company's inclusion of the unamortized balance of coal ash expenditures in rate base. (*Id*. at 215-16.) According to Witness Maness, his adjustments 2 & 3 would produce an "equitable and reasonable sharing" of the burden of coal ash expenditures between the Company's customers and its shareholders. (*Id.*)

In support of his equitable sharing proposal, Witness Maness stated his belief that there is a history of Commission approval for the sharing of extremely large costs that do not result in any new generation of electricity for customers, including, for example, the costs of abandoned nuclear construction and environmental clean-up of manufactured gas plant facilities. (*Id*. at 219.) Accordingly, Witness Maness testified that even if the reasons for equitable sharing set forth by Witness Lucas were not present, the Public Staff would still recommend some level of equitable sharing of the costs the Company has incurred with respect to CCR compliance. Moreover, Witness Maness confirmed that

it is the Public Staff's position that equitable sharing may be appropriate and reasonable even in the absence of a finding that any specific cost was incurred imprudently.

Explaining the methodology behind the Public Staff's proposed equitable sharing approach, Witness Maness stated that he employed a two-step process to reach his overall recommended adjustments: (1) exclude the unamortized amount of the deferred expenses from the rate base such that the Company will not be allowed to earn a return from customers on the unamortized balance; and (2) choose an amortization period that will result in a reasonable and appropriate sharing of the costs. (*Id*. at 222.) With respect to the former, Witness Maness argued that it was appropriate to exclude CCR costs from the rate base because such costs, in the Public Staff's opinion, are not "used and useful" similar to the costs incurred to construct abandoned nuclear plants that were never used. (*Id*. at 223-25.) With respect to the latter step, Witness Maness stated that the Public Staff's proposed 19-year amortization period would result in customers bearing approximately 60% of the present value of the deferred costs—in other words, a 60/40 split of the CCR costs between customers and shareholders, respectively. (*Id*. at 235.) Admitting that 60/40 sharing proposal is a "qualitative judgment," Witness Maness explained that the Public Staff believes the proposed split to be reasonable because it understands the purported culpability to be less than that of either Duke Energy Progress, LLC or Duke Energy Carolinas, LLC, where the Public Staff recommended 50/50 and 51/49 sharing, respectively. (*Id*. at 236.)

In supplemental testimony, Witness Maness recommended a reduction in the amortization period for deferred CCR costs from 19 years to 18 years. (*Id*. at 246.) Witness Maness explained that, in the Stipulation between DENC and the Public Staff,

the Public Staff agreed to increase its initially recommended rate of return to 7.2%. Accordingly, the amortization period needed to achieve the 60/40 split being recommended by the Public Staff decreased to 18 years. (*Id*. at 246.)

D. Company Rebuttal Witnesses

Rebuttal testimony with respect to the reasonableness and prudence of the Company's coal ash basin closure costs was provided by Company Witness Williams. Rebuttal testimony with respect to Witness Maness' proposed adjustments was provided by Witness McLeod. Rebuttal testimony with respect to the Company's entitlement to earn a return on the unamortized balance of coal ash costs, ARO accounting and the "used and useful" concept, was provided by Witness McLeod. Such testimony is summarized as follows.

1. Williams

Company Witness Williams' rebuttal testimony responded to the direct testimony of Public Staff Witnesses Lucas and Maness regarding the Public Staff's recommended "equitable sharing" disallowance. Witness Williams observed that the Public Staff's disallowance theory largely rests on its opinion that DENC was "culpable" for creating a risk of coal ash contamination that has led to actual environmental contamination. (Tr. Vol. 7 at 52.) He also noted, though, that the Public Staff argued that "equitable sharing" would be appropriate even without "culpability" solely because of the magnitude of DENC's requested costs. "Culpability" suggests wrongdoing, and Witness Williams noted that the Public Staff has acknowledged that it is not capable or willing to identify a specific action the Company could have taken in the past. For example, Witness Lucas

previously testified in the 2018 DEP Rate Case, in which the Public Staff also recommended equitable sharing based on DEP's historical ash management practices:

> We can't go back in time and say, oh, they should have put in a clay liner in 1978 or done dry ash stacking in the 1980s. I mean, that's impossible to go back and put all these "what ifs" together and say exactly here's what they should have done. And here's what would have been the cost, and that cost would have been in the rates today for customers.
> …
> [T]hat's going back to the past. Somebody could have gone back and said what you should have done back at a certain time. And that's — you could be talking about the prudence, and I can't go back and — I can't go back and tell you exactly what would have happened what you should have done at a certain time. I'm not sure what good it would have done...[5]

(*Id*. at 52.)

Instead of delving into the distant past, Witness Williams argued that this case should be focused on determining whether the identifiable CCR costs that the Company incurred from July 1, 2016 through June 30, 2019 were the result of reasonable and prudent decisions made at the time the costs were incurred. He conceded that DENC's costs are reasonable and prudent because the Public Staff did not recommend a single, specific cost disallowance related to DENC's CCR impoundments or landfills. (*Id*. at 56.)

Witness Williams also questioned whether it was even within the Public Staff's purview and scope of expertise to evaluate the Company's compliance with environmental regulations and standards. He noted that neither the Company nor the Public Staff could find any example prior to 2016 where the Public Staff had raised any concerns regarding groundwater or surface water issues related to CCR or CCR

[5] Docket No. E-2, Sub 1142, Tr. Vol. 19 at 34-5; 37.

management strategies at any of DENC's facilities. (*Id*. at 57-58; Company Rebuttal Exhibit JEW-1.) He noted that it has been the Public Staff's position that it is not an environmental regulator, and environmental regulation over DENC's CCR impoundments and landfills is the responsibility of state agencies like VA DEQ and WV DEP. And when a utility complies with the directives of its environmental regulators, it has been the position of the Public Staff that such actions would not be considered mismanagement. Witness Williams testified that if the Public Staff's role did not involve evaluating the Company's CCR management practices when the management decisions were made, the Public Staff cannot argue that its role in the present case involves second-guessing the decisions of the Company and its environmental regulators decades later. (Tr. Vol. 7 at 59.)

Witness Williams further questioned the Public Staff's role and expertise regarding environmental issues in light of testimony submitted by the Public Staff in May 2019 in Docket No. EMP-103, Sub 0. In that case, Albemarle Beach Solar, LLC applied for a certificate of public convenience to construct an 80 megawatt solar facility in Washington County, North Carolina. An issue in the docket was the potential environmental impacts of the solar project. The Public Staff deliberately did not opine on those potential environmental issues and testified:

> [T]he Public Staff does not have particular expertise in the area of impacts of electric generation on the environment. Those issues are best left to the purview of environmental regulators who do have this expertise, and who are responsible for issuing specific environmental permits for electric generating facilities. To that end, as stated below, the Public Staff recommends that the Commission require compliance with all permitting requirements[.]

(*Id*. at 59-60.) Witness Williams noted that the Public Staff witness who offered the testimony in Docket No. EMP-103, Sub 0 held the same position within the Public Staff – Utilities Engineer, Electric Division – as Witness Lucas. Based on the Public Staff's admissions about its role and the scope of its expertise, Witness Williams opined that Witness Lucas' testimony was unreliable. (*Id*.) He also commented that the Public Staff's recent attempts to take on the role of a hindsight environmental regulator would promote inefficiency and inconsistency within the utility industry. It would be inefficient because environmental regulators already consider and understand the potential impacts of their decisions, such as when and to whom to issue permits, when and where to require and not require groundwater monitoring, or how potential impacts, if manifested, should be addressed. The Public Staff is attempting to second-guess those efforts but without the requisite level of expertise. It would promote inconsistency because having utilities be subject to the Public Staff's hindsight environmental review would potentially undermine the decisions, judgment, and expertise of environmental regulators. (*Id*. at 62.)

Witness Williams next responded to the Public Staff's criticisms of his expertise and ability to testify regarding historical CCR management decisions made by the Company. He found those criticisms to be unfounded. He testified that he was a professional geologist with almost twenty (20) years of groundwater remediation and waste management experience. This experience included five years that he spent with VA DEQ, where he was the lead staff on reviewing coal ash regulations following the TVA dam failure in 2008. His role was to not only provide expertise in coal ash, but to also provide guidance regarding Virginia's groundwater requirements and their history.

While at the Company, he has also become proficient in West Virginia's groundwater regulations and their application to DENC's Mt. Storm facility. Since the Public Staff's recommended disallowance is largely based on alleged groundwater issues at DENC's sites in Virginia and West Virginia, he explained that he was extremely well-qualified to explain the Company's CCR management decisions with respect to groundwater in those states. Additionally, he explained that he was well-positioned to discuss the history of CCR management at DENC's facilities. In his role as Director of Environmental Services, he was responsible for overseeing environmental compliance at all of DENC's coal-fired plants. That role required that he understand how those plants and CCR storage facilities have been historically operated. Additionally, he reviewed historical regulatory reports as well as the studies cited by Witness Lucas, and explained that he was well-qualified to understand those materials in their proper context and to draw meaningful and reasoned conclusions from them. (*Id*. at 60-61.)

Witness Williams next addressed Witness Lucas' criticisms and characterizations of DENC's historical CCR management practices and environmental compliance history. Witness Williams disagreed with Witness Lucas' contention that the electric generating industry knew or should have known that wet storage of CCR in unlined surface impoundments was detrimental to the quality of surrounding groundwater and surface water. He observed that none of the articles, reports, or studies cited by Witness Lucas condemn or recommend the elimination of the use of unlined impoundments. Further, he explained that unlined surface impoundments are not by their very existence "detrimental" to groundwater and nearby surface water. He explained that EPA reports from the 1980s through the 2000s show that site specific and regional factors must be

considered to evaluate potential impacts to water quality from surface impoundments. And, even if impacts are discovered, that does not mean that the public or environmental health has been threatened. (*Id*. at 64-65.)

Witness Williams testified that much context was missing from Witness Lucas' testimony regarding the Company's historical management practices. He opined that the Public Staff's testimony was devoid of any qualitative analysis of the evolving knowledge of potential impacts from CCR management practices. He explained that understanding the extent and nature of potential impacts is crucial to determining whether the Company adequately managed its CCR. He also testified that one should consider how different actions may have impacted DENC's ability to reliably generate electricity to meet demand and other economic impacts. While surface impoundments are now being regulated out of existence, Witness Williams explained that surface impoundments were original constructed as an environmental solution to address concerns about air emissions from coal-fired plants. Those concerns resulted in the adoption of emission control technologies to collect CCR, which previously would have been emitted into the air, and direct the CCR via water to surface impoundments serving a water treatment function. EPA's approach to regulating CCR has evolved significantly over time, ultimately culminating in the CCR Rule. (*Id*. at 65-66.)

To show that evolution, Witness Williams summarized the major federal regulatory determinations and reports affecting CCR from the 1970s through the promulgation of the CCR Rule. Those determinations and reports reflected EPA's findings after considering the available scientific and industry knowledge. Witness Williams testified that, until the CCR Rule, EPA's position was to defer to state agencies,

like VA DEQ and WV DEP, to regulate CCR and determine whether industry practices were sufficiently protective of the environment. He testified that it was not until 2010, when the draft CCR Rule was published, that EPA first proposed actions to address potential environmental risks from unlined surface impoundments. That is because, until the CCR Rule, EPA had concluded that a one-size-fits-all federal regulatory approach was not deemed necessary to address region-specific conditions and risks. Even then, one of EPA's proposals would have allowed the continued use of unlined surface impoundments until they reached the end of their useful life. (*Id*. at 65-73.)

Witness Williams opined that DENC responded reasonably and appropriately to evolutions in industry practices and regulatory approaches for CCR management by following the directives of its state regulators. Witness Williams described the regulatory regimes in Virginia and West Virginia that were applicable to its CCR surface impoundments and landfills. He explained that Virginia first adopted groundwater regulations in 1977. From 1977 until 1998, VA DEQ's regional offices evaluated groundwater risks at CCR facilities through requirements placed in the Company's VPDES, Virginia Pollution Abatement (VPA) permits, and solid waste permits. Additionally, he explained that local governments were also able to require groundwater monitoring through conditional use permits issued for certain CCR storage facilities. He testified that in 1998, VA DEQ developed a policy (1998 VA DEQ Guidance) to promote consistent standards amongst its six regions, which included guidance on when to require groundwater monitoring, how monitoring wells should be installed, the parameters that should be considered for monitoring, the proper methods for collecting and analyzing samples, determining the need for and execution of risk assessment, and selecting

remedial methods, if needed. He explained that under the 1998 VA DEQ Guidance, ultimate responsibility for determining whether groundwater monitoring was necessary was delegated to the permit writer, who was a member of VA DEQ staff with specialized expertise. If groundwater monitoring was determined to be necessary, the permit writer could require DENC to develop a groundwater monitoring plan (GWMP). Witness Williams testified that VA DEQ adopted a phased approach for groundwater monitoring. The first phase would typically involve a small number of wells (minimum of one upgradient and two downgradient). If potential groundwater impacts were detected during the first phase, a second phase with additional monitoring wells could be required. He testified that based on the groundwater monitoring data received (i.e. constituents, detected levels, extent of plume, proximity of plume to receptors), VA DEQ could then determine whether a risk assessment was necessary. If VA DEQ identified a potential risk, then it could require remedial action, which could range from requiring closure, excavation, or lining of surface impoundments. However, he explained that VA DEQ would have selected a remedial option that was commensurate with the risks posed by the potential impacts. If impacts or potential off-site risks were deemed not to be harmful, VA DEQ could determine that leaving the groundwater alone (i.e. natural attenuation) at that point may be all that is necessary. (*Id*. at 74-75.) Similar to VA DEQ, WV DEP was responsible for overseeing the State's solid waste program applicable to CCR storage. As of 1987, all CCR disposal sites in West Virginia were required to meet leachate, waste confinement, and aesthetic standards, and there were provisions for groundwater monitoring and final cover requirements. (*Id*. at 76.)

At its Virginia stations, Witness Williams testified that by 1988, when the EPA published its report to Congress, DENC was monitoring groundwater at all but one of its active stations pursuant to VA DEQ requirements and standards. By 2000, he testified that the Company was monitoring groundwater at all of its Virginia stations. At the Company's Mt. Storm facility in West Virginia, groundwater monitoring began in 1987 after DENC received its NPDES permit to construct the CCR landfill. Similar to the approach taken in Virginia, an exceedance of a groundwater standard in West Virginia was not managed as a violation warranting a penalty. Instead, DENC would have been required to take additional steps to evaluate groundwater quality, including increasing the frequency of sampling, adding parameters to monitor, and assessments for potential remedial action. Witness Williams explained that WV DEP never required corrective action for groundwater exceedances. (*Id*. at 75-77.)

Based on the robust regulatory oversight that was in place in Virginia and West Virginia and DENC's compliance with regulatory directives, Witness Williams disagreed with Witness Lucas' contention that the Company did not install comprehensive groundwater monitoring well networks to evaluate potential groundwater impacts from CCR surface impoundments. He noted, though, that Witness Lucas did not explain what he meant by "comprehensive monitoring" or how it would differ from what the Company had already been doing. In fact, Witness Lucas provided no meaningful and necessary details to explain what "comprehensive monitoring" should have occurred, including how many background and monitoring wells should have been installed, the location of wells, the constituents to be monitored, or the frequency of testing. (*Id*. at 78-79.) Further, Witness Williams noted that Witness Lucas did not explain why VA DEQ and WV

DEP's judgment regarding the necessity for and scope of groundwater monitoring should be ignored in favor of his undefined, hindsight standard. Considering DENC's state environmental regulators did not believe that installing extensive groundwater monitoring networks was necessary or appropriate for all sites, Witness Williams questioned whether DENC's economic regulators, including this Commission and Virginia's State Corporation Commission, would have deemed costs to install and monitor unnecessary wells to be reasonable. (*Id*. at 80.)

Witness Williams explained that DENC and its state regulators took a measured approach to assess and mitigate potential risks from CCR storage facilities. He testified that DENC collected groundwater data in accordance with its environmental permits, and it submitted that data to its environmental regulators for review and analysis. In the event of exceedances, he explained that regulators on some occasions used their expertise and professional judgment to require further action, including increasing monitoring frequency, increasing the number of constituents to be sampled, requiring the installation of new wells, or requiring the preparation of site characterization studies to evaluate potential risks. Witness Williams testified that in all cases, the Company complied with any additional actions required by its environmental regulators to mitigate risks and protect the environment. He noted that for all of DENC's lined and unlined surface impoundments, state environmental regulators reissued permits allowing the Company to continue to dispose and store CCR in those impoundments. He opined that had environmental regulators determined that DENC's CCR storage areas posed a threat to human health or the environment, they would not have continued to renew those operating permits, and would have required more corrective actions. (*Id*. at 80-81.)

Witness Williams also testified that Witness Lucas could not explain how groundwater monitoring different than what had been historically required by VA DEQ and WV DEP (i.e. "comprehensive groundwater monitoring well networks") would have changed the Company's CCR management practices or avoided the present-day costs that the Company is seeking to recover in this case. (*Id*. at 81-82.)

Witness Williams also responded to Witness Lucas' contention that DENC, as an industry leader, was responsible for setting the industry standards. Although Witness Lucas was apparently critical of those industry standards, Witness Williams noted that Witness Lucas did not explain or define what the industry standard should have been, nor did he argue that DENC's compliance with the industry standard and applicable laws was unreasonable or irrelevant. At the same time according to Witness Williams, Witness Lucas insinuated that DENC should have moved well ahead of accepted science, regulatory requirements, and industry practice by taking unspecified measures to prevent any and all groundwater quality impacts regardless of cost, despite likely interruptions to electric service, and without evidence of any potential harm to human health or the environment. (*Id*. at 83.)

Witness Williams rejected Witness Lucas' assertion that the Company was or should have been aware of environmental degradation caused by its CCR because of environmental studies that were conducted at Possum Point, Chesapeake, Chesterfield, and Yorktown. Witness Williams opined that the existence of exceedances, alone, did not mean that the Company harmed the environment or otherwise mismanaged its CCR. He explained that the existence of past and present groundwater exceedances reflects historical construction practices and the evolution of groundwater assessment and

corrective action under modern laws. He testified that EPA was aware that the design of ash basins had resulted in groundwater concerns throughout the industry; however, EPA determined that immediately closing basins, which would require shutting down operating coal plants, would be more harmful to human health and the environment than taking a measured approach. DENC's state regulators focused on whether the exceedances were causing, or had the potential to cause harm to, any on- or off-site receptors to determine whether mitigation measures were necessary. The existence of an exceedance of applicable standards at a particular location was not evidence of actual or potential harm; rather, it was a data point that informs whether and to what extent further study is required to assess potential risk. Witness Williams cited the 1998 VA DEQ Guidance which stated that "risk assessment ultimately determines whether some measure of remediation needs to be completed." He then pointed out that none of the reports cited by Witness Lucas indicated any risk to offsite human health or ecological receptors. (*Id*. at 83-86.)

Witness Williams testified that the reports cited by Witness Lucas actually show that DENC was diligently monitoring groundwater to determine whether further mitigation measures were necessary. When VA DEQ did require follow-up measures, he testified that the Company took appropriate measures. He rejected Witness Lucas contention that the Company did not follow the directives of its regulators regarding groundwater issues at Possum Point. He pointed out that Witness Lucas' own exhibit showed that the Company did, in fact, comply with a Special Order issued by the State Water Control Board, which was confirmed by the cancellation of that order in 1991. Witness Williams also clarified that the report relating to groundwater issues at Yorktown

that was cited by Witness Lucas had nothing to do with CCR. (*Id*. at 84-85.) Regarding Witness Lucas' reference to Chisman Creek and the Battlefield Golf Club site, Witness Williams testified that those sites were irrelevant to the issues in this case because neither site is subject to the CCR Rule, neither site was owned by DENC when contamination occurred, and neither site managed CCR in surface impoundments or landfills. (*Id*. at 86-88.) Likewise, Witness Williams testified that the legal matters cited by the Public Staff were also irrelevant and misleading because Witness Lucas did not argue that the existence of those cases was evidence of wrongdoing, mismanagement or harm to the environment. (*Id*. at 88-89.)

Witness Williams also responded to the Public Staff's criticisms of the discovery process, which he opined was merely a distraction from the true purpose of the proceeding. He represented his and his staff's good faith efforts to locate, collect, and then produce information and documents spanning almost four decades of the Company's operations. He estimated that DENC employees spent over 250 hours searching for and collecting information, culminating in the production of decades' worth of CCR-related documents to the Public Staff. He noted that the Public Staff never filed a motion to compel, despite claiming DENC's responses were inadequate. He also testified that he was not aware of any legal requirement or business reason to retain decades-old permitting materials, especially when the Company could not have foreseen that the Public Staff would, decades after the CCR storage facilities were constructed, be scrutinizing the Company's historical CCR management practices. Witness Williams explained that Witness Lucas' testimony regarding purported examples of discovery

deficiencies and instances of non-responsiveness was misleading, irrelevant, and false. (*Id*. at 89-92.)

Witness Williams also rejected the Public Staff's claim that it did not have enough information to evaluate the Company's environmental compliance history. As the Public Staff did not conduct a prudence review, nor did it have any intent to do so, it was unclear to Witness Williams how additional information regarding historical CCR management decisions would have been helpful or relevant to the Public Staff. Responding to Witness Lucas' testimony complaint regarding the lack of groundwater reports prior to 2000, Witness Williams testified that DENC did provide the Public Staff with a spreadsheet showing all of the approximately 300,000 groundwater monitoring results going back to the beginning of monitoring for each site, each of which would have been provided to VA DEQ or WV DEP. He opined that DENC's compliance history could be judged by its regulators' response to those monitoring results:

- DENC's environmental regulators did not require the Company to retrofit its existing impoundments with liners;
- DENC's environmental regulators did not require the Company to close its existing impoundments;
- DENC's environmental regulators did not require the Company to excavate CCR from its existing impoundments;
- DENC's environmental regulators authorized the Company's continued use of its existing impoundments;
- DENC's environmental regulators authorized the Company to continue disposing of CCR in its existing impoundments; and
- DENC's environmental regulators, where potential groundwater impacts were identified, required further monitoring, risk assessments, or corrective action.

He testified that, while VA DEQ and WV DEP had the authority, they never saw a sufficient environmental justification for requiring DENC to change its CCR management practices. And, in the absence of any environmental justification, he opined that the Company would not have been able to make an economic justification to its shareholders and customers for overhauling its operations. He testified that the Public Staff's assertion that "missing" groundwater data would have shown additional evidence of degradation was speculation, was not scientifically supported, and was not consistent with the regulatory record. Moreover, he testified that it would be speculation built on speculation to suggest that additional evidence would have triggered any different action by environmental regulators or the Company. He opined that recent groundwater data collected under the CCR Rule, which did not show risks to human health or the environment, confirmed that additional data would not have spurred state regulators to require changes to the Company's CCR management practices. (*Id*. at 92-94.)

Witness Williams concluded his rebuttal testimony by showing that the Public Staff's hindsight review of the Company's historical CCR management practices was unfair and not productive. He noted that the Public Staff and the Commission knew about and never objected to the continued use of surface impoundments and landfills in North Carolina. He explained that burning coal and storing the byproducts was essential to providing reliable electricity in the region for decades. Witness Williams conceded that present and future CCR costs were significant but that the Company was minimizing those costs to the degree possible. He expressed his concern that the Public Staff's recommended disallowance of admittedly prudent and reasonable costs through

"equitable sharing" was shortsighted and could lead to an unpredictable and unhealthy regulatory environment for utilities and their customers. (*Id*. at 96-97.)

2. McLeod

In his rebuttal testimony, Witness McLeod noted that the Public Staff agrees and makes no objection the Company's ongoing deferral accounting treatment of CCR costs. (Tr. Vol. 6 at 665.) He next addressed each of the Public Staff's three recommended adjustments set forth in the testimony of Witness Maness. First, he stated that the Company accepts as reasonable the Public Staff's recommended adjustment to use annual compounding rather than monthly compounding for financing costs incurred on CCR ARO expenditures during the deferral period of July 1, 2016 through June 30, 2019. Witness McLeod noted that this change reduces the Company's Adjustment NC-33 by $23,000. (*Id*. at 667.)

Witness McLeod next explained the Company's opposition to Witness Maness' purported justification for the Public Staff's proposed equitable sharing approach. As a threshold matter, Witness McLeod noted that neither Witness Lucas nor Witness Maness identified any specific CCR ARO costs that the Public Staff alleges to be imprudent or unreasonable. (*Id*. at 667.) In doing so, Witness McLeod underscored that the appropriate regulatory standard for denial of cost recovery is a finding that a specifically identified cost has been imprudently incurred or that the level of cost incurred is unreasonable. In the absence of an allegation of imprudence or unreasonableness, Witness McLeod found the Public Staff's proposal to be "standard-less," subjective, and inappropriate. (*Id*. at 669.) For example, Witness McLeod noted that the Public Staff can point to no methodology that would support its selection of the proposed 60/40

sharing split. Noting Witness Maness' concession that the Public Staff subjectively selected a sharing ratio, then "backed into" the mechanism necessary to achieve that level of disallowance, Witness McLeod highlighted that the Public Staff chose differing percentages for equitable sharing in each of the instances in which it has advocated for adoption of the principle—50/50 in the DEP rate case, 51/49 in the DEC rate case, and 60/40 in the instant case. (*Id.* at 670.) In Witness McLeod's view, the Public Staff's "qualitative judgment" with respect to the proposed disallowance is inappropriate as a regulatory cost recovery approach.

Witness McLeod next refuted Witness Maness' contention that the Commission should treat the Company's request to recover its prudently incurred CCR costs the same as it did costs associated with abandoned nuclear plants. In particular, Witness Maness noted that abandoned nuclear plant costs are not comparable to the costs of CCR remediation, because—unlike CCR generating plants—abandoned nuclear plant costs were never used and useful in providing utility service to customers. (*Id*. at 672.) Moreover, Witness McLeod noted that the Commission rejected this comparison in both of the recent Duke Energy rate cases.

Witness McLeod likewise disagreed with Witness Maness' contention that the Commission's prior treatment of environmental clean-up costs of manufactured gas plants (MGPs) supports an equitable sharing of coal ash costs. In particular, Witness McLeod noted a few key differences between MGP and coal ash costs. First, at the time of clean-up, the majority of MGP sites had not been used in decades. In contrast, the Company's coal-fired generating units and/or the coal ash disposal facilities are either still providing services to customers or were providing service until very recently. (*Id*. at

674-75.) Second, the coal-fired generating plants that utilized the coal ash disposal facilities have always been in the ownership of the Company or its predecessors. Most MGP sites, on the other hand, had several owners before being acquired by the regulated gas utilities that eventually undertook MGP clean-up. (*Id*. at 675.)

Rather than rely on the ill-fitting analogies put forth by Witness Maness, Witness McLeod urged the Commission to adopt the cost recovery methodology used by this Commission in the 2016 DENC Rate Case and the two Duke Energy rate cases that were heard in 2018. (*Id*. at 676.) In each of those cases, Witness McLeod noted, the Commission found the relevant CCR expenditures to be used and useful because they were included in the working capital section of the rate base and were investor-furnished rather than ratepayer-furnished funds. (*Id*. at 679.)

Next, Witness McLeod stated that he did not believe the 19-year amortization period proposed by the Public Staff to be in the best interest of either North Carolina customers or the Company. He noted that a longer amortization period costs customers more in the long run and delayed recovery of these deferred costs puts more pressure on rates in the future as the company will continue to incur significant additional environmental expenditures related to CCR regulatory compliance in the coming years.

Finally, Witness McLeod noted that Witness Maness' proposal to account for CCR costs differently because they are an "extremely large cost" is not workable from a regulatory accounting perspective. Because the Public Staff and Witness Maness have offered no explanation as to the definition of an "extremely large cost," adopting a regulatory order based on a subjective interpretation of the term is inconsistent with Witness McLeod's experience of regulatory ratemaking and with known principles of

regulatory accounting. (*Id*. at 683.) In this case, the total rate changes in the stipulation provides for an overall rate decrease for the North Carolina jurisdiction. This includes amortization of the CCR regulatory over a five-year period with a return on the unamortized balance. If the Public Staff's 19-year amortization proposal is adopted by the Commission, the result will likely be overlapping vintages of CCR regulatory asset amortizations across multiple, future rate cases in which the Company will be requesting recovery of additional deferred CCR costs. The Company's proposed 5-year amortization of these regulatory assets allows rates to be set at a just and reasonable level that positions the Company's current rate structure to recover these actually-incurred costs over a reasonable amount of time. (*Id*. at 680-81.)

Discussion and Conclusions

A. General Cost Recovery Principles

A central operating principle underlying utility rate regulation in North Carolina (and virtually all other jurisdictions) is that the utility's costs are recoverable in rates. As two of the leading modern commentators on utility regulation put it in the opening paragraphs to a chapter (titled "The Role of the Revenue Requirement") in their treatise on utility regulation:

> No firm can operate as a charity and withstand the rigors of the marketplace. To survive, any firm must take in sufficient revenues from customers to pay its bills and provide its investors with a reasonable expectation of profit …. Regulated firms are no exception. They face the same constraints ….
>
> A basic concept underlying all forms of economic regulation is that a regulated firm must have the opportunity to recover its costs. … Without the opportunity to recover all of its costs and earn a reasonable return, no regulated private company can attract the capital necessary

> to operate. Jonathan A. Lesser & Leonardo R. Giacchino, *Fundamentals of Utility Regulation 39* (Pub. Utils. Reports, Inc., ed., 2007) (Lesser & Giacchino).

Lesser & Giacchino refers to the concept of cost recovery as the "revenue requirement" (*id.*), and the North Carolina Supreme Court has also acknowledged its central role in utility ratemaking. *See, e.g.*, *State ex rel. Utils. Comm'n v. Thornburg*, 325 N.C. 484, 490, 385 S.E.2d 463, 466 (1989) (*Thornburg II*) and *State ex rel. Utils. Comm'n v. Thornburg*, 325 N.C. 463, 467 n.2, 385 S.E.2d 451, 453 n.2 (1989) (*Thornburg I*), in which the concept is stated to be embedded in the statutory rate making formula, and, indeed, expressed formulaically:

> This statute [N.C. Gen. Stat. § 62-133] requires the Commission to determine the utility's rate base (RB), its reasonable operating expenses (OE), and a fair rate of return on the company's capital investment (RR). These three components are then combined according to a formula which can be expressed as follows:
>
> (RB x RR) + OE = REVENUE REQUIREMENT

Costs are not recoverable simply because they are incurred by the utility. The utility must show that the costs it seeks to recover are (1) "known and measurable"; (2) "reasonable and prudent"; and (3) where included in rate base "used and useful" in the provision of service to customers. Lesser & Giacchino, at 41-43. But once it has shown that these metrics are met, the utility should have the opportunity to recover the costs so incurred. This is what North Carolina's ratemaking statute requires (*see* N.C. Gen. Stat. § 62-133(b)(5)), and to do otherwise would amount to an unconstitutional taking.

In this case, no party has questioned whether the coal ash basin closure costs for which the Company seeks recovery are "known and measurable"; indeed, the Company documented these costs and has shown that they were in fact incurred, as evidenced by

the Company's Application and direct testimony. Further, no party challenged the reasonableness and prudence of any discrete CCR compliance cost requested by the Company. Rather, the arguments raised by the Public Staff challenging the Company's costs center on whether the Commission should apply the "reasonable and prudent" standard to DENC's CCR compliance costs and whether the CCR costs are "used and useful." The concepts of "reasonable and prudent" and "used and useful" costs have been framed by this Commission and the North Carolina Supreme Court, as discussed further below.

1. Reasonable and Prudent

This Commission has consistently applied the "reasonable and prudent" standard to determine recovery of a utility's costs. The seminal treatment of "reasonable and prudent" costs is this Commission's order entered in Docket No. E-2, Sub 537 (the 1988 DEP Rate Order), in which the Commission approved, with some exceptions, costs the Company incurred in connection with the construction of Unit 1 of the Shearon Harris nuclear plant. *See* 1988 DEP Rate Order.

In the 1988 DEP Rate Order, the Commission established as the standard for judging prudence as "whether management decisions were made in a reasonable manner and at an appropriate time on the basis of what was reasonably known or reasonably should have been known at that time. … [T]his standard … must be based on a contemporaneous view of the action or decision under question. Perfection is not required. Hindsight analysis – the judging of events based on subsequent developments – is not permitted." 1988 DEP Rate Order, p. 14. Challenging prudence requires a detailed and fact intensive analysis, and the challenger is required to (1) identify specific and

discrete instances of imprudence; (2) demonstrate the existence of prudent alternatives; and (3) quantify the effects by calculating imprudently incurred costs. Specifically,

- A decision cannot be imprudent if it represents the only feasible way to accomplish a necessary goal.
- The Commission can only disallow imprudent expenditures – that is, actions (even if imprudent) with no economic impact upon customers are of no consequence. Thus, identification of an imprudent action or inaction is not by itself sufficient; rather, there must be a demonstration of the economic impact.
- The proper amount chargeable to customers is what the expenditure would have been absent the imprudent acts or decisions of management.

Id. at 15. The North Carolina Supreme Court upheld the Commission's prudence determination. *See Thornburg II*, 325 N.C. at 489, 385 S.E.2d at 466 (finding "no error" in that portion of the Commission's decision).

2. Used and Useful

"Used and useful" is a concept directly embedded in the ratemaking statute – N.C. Gen. Stat. § 62-133(b)(1) states that the Commission must "[a]scertain the reasonable original cost of the public utility's property used and useful, or to be used and useful within a reasonable time after the test period, in providing the service rendered to the public within the State, less that portion of the cost which has been consumed by previous use recovered by depreciation expense …." In general, the Supreme Court's treatment of the concept has been in the negative, i.e., asserting as a basis for its decision that something is not "used and useful." For example, excess common facilities are not "used and useful" as a matter of law, *see Thornburg II*, 325 N.C. at 495-96, 385 S.E.2d at 469,

and a water treatment plant that was not in service as of the end of the test year and would never again be in service was not "used and useful" within the meaning of N.C. Gen. Stat. § 62-133(b)(1). *State ex rel. Utils. Comm'n v. Carolina Water Serv., Inc.*, 335 N.C. 493, 508, 439 S.E.2d 127, 135 (1994). The reverse, of course, is that if the expenditures do support and provide service to customers, the costs are "used and useful."

3. Burden of Proof

In applying the "reasonable and prudent" and "used and useful" standards, the Commission must apply the appropriate burden of proof to the Company's and intervenors' arguments. DENC argues that it incurred the CCR compliance costs at issue, supported by its application and the direct testimony filed in this case. Therefore, it argues that it has met its prima facie burden, which was unrebutted because Public Staff has failed to identify or justify discrete disallowances under the applicable imprudence standard. The Public Staff argues that it does not need to identify specific instances of imprudence and corresponding discrete costs to justify its equitable sharing proposal. We agree with the Company that the burden shifting framework established by the United States Supreme Court and North Carolina law is the appropriate standard.

According to the United States Supreme Court, "[g]ood faith is to be presumed on the part of managers of a business. … In the absence of showing of inefficiency or improvidence, a court will not substitute its judgment for theirs as to the measure of a prudent outlay." *West Ohio Gas Co. v. Ohio Pub. Utils. Comm'n.*, 294 U.S. 63, 72, 55 S. Ct. 316, 321 (1935).

In a case cited with favor in Priest, *Principles of Public Utility Regulation*:[6]

> Only where affirmative evidence is offered challenging the reasonableness of the operating expenses incurred, on the grounds that they are exorbitant, unnecessary, wasteful, extravagant, or incurred in the abuse of discretion or in bad faith, or are of a nonrecurring character not likely to recur in the future, has the commission a reasonable discretion to disallow any part of the expenses actually incurred.

Alabama Pub. Serv. Comm'n v. Southern Bell Tel. & Tel. Co., 253 Ala. 1, 42 So.2d 655, 674 (1949) cited with approval, *State ex rel. Utils. Comm'n. v. Intervenor Residents*, 305 N.C. 62, 77, 286 S.E.2d 770, 779 (1982).

The burden of proof to show that rates are just and reasonable is always on the utility. *See* N.C. Gen. Stat. § 62-134(c). An intervenor, however, has a burden of production in the event that they dispute an aspect of the utility's prima facie case. *See, e.g., State ex rel. Utils. Comm'n v. Conservation Council*, 312 N.C. 59, 64, 320 S.E.2d 679, 683 (1984) (utility's costs are "presumed to be reasonable" unless challenged); *State ex rel. Utils. Comm'n v. Intervenor Residents of Bent Creek/Mt. Carmel Subdivisions*, 305 N.C. 62, 76-77, 286 S.E.2d 770, 779 (1982) ("The burden of going forward with evidence of reasonableness and justness arises only when the Commission requires it or affirmative evidence is offered by a party to the proceeding that challenges the reasonableness of expenses…."). If an intervenor meets its burden of production, the ultimate burden of persuasion reverts to the utility, in accordance with N.C. Gen. Stat. § 62-134(c).

The Commission has consistently followed this shifting burden framework. In practice, this means that Intervenors may not rest merely on arguments and theories, they

[6] A.J.G. Priest, *Principles of Public Utility Regulation*, Vol. I, pp. 422-23 (1969).

must adduce actual evidence challenging some aspect of the Company's cost recovery case. Further, that evidence must support the intervenor's challenge under the substantive standard established by North Carolina law. Evidence predicated on 20/20 hindsight is insufficient to effectuate a prudence challenge because the substantive prudence standard forbids hindsight analysis.

The CCR compliance costs DENC seeks to recover in this docket consist of costs incurred between July 1, 2016 and June 30, 2019 to dewater surface impoundments in preparation for closure, consolidate CCR onsite, and perform groundwater monitoring, among other tasks, pursuant to requirements of EPA's CCR Rule and applicable Virginia and West Virginia regulatory requirements. In compliance with this Commission's authorization, these costs have been deferred to permit appropriate ratemaking treatment in this case. Once the Company has met its prima facie burden with respect to these compliance costs, the burden shifts to the Public Staff to identify specific incidences of imprudence and that the compliance costs at issue are not "used and useful." As discussed further below, the Commission finds that DENC met its burden in this case and finds that the Public Staff has not.

B. Conclusions with Respect to July 1, 2016 through June 30, 2019 Costs

1. DENC met its burden of proof that its CCR compliance costs were "reasonable and prudent," and its costs were not credibly challenged by any intervenor.

The Commission determines that the Company has met its burden – both the prima facie burden of production and the ultimate burden of persuasion – of showing that the CCR compliance costs it actually incurred from July 1, 2016 through June 30, 2019 are recoverable and that a return is warranted. No intervenor has challenged or recommended a disallowance for any specific cost incurred by the Company during that

period related to CCR compliance. For its disallowance, the Public Staff relied on an "equitable sharing" theory, not on a theory of imprudence. The expert witnesses sponsored in this case by the Public Staff failed to support any allegation of discrete actions or a single discrete CCR compliance cost as being imprudent or unreasonable. Absent evidence of imprudent or unreasonable compliance activities and costs, the Commission authorizes recovery of DENC's CCR compliance costs from July 1, 2016 through June 30, 2019.

Consistent with its long-standing approach to determine cost recovery, the Commission will apply the "reasonable and prudent" standard to DENC's compliance costs. The Commission has not been cited any case to support the theory that, in determining the recovery through utility rates of costs incurred by management to comply with express requirements of environmental regulators, management's decisions should be assessed by any standard other than the reasonableness and prudence standard. The Public Staff, admittedly, has not offered evidence in this case to support a finding of imprudence. The Public Staff, instead, relied on "equitable sharing" for its proposed disallowance, which does not depend on a finding discrete instances of imprudence or unreasonableness. Public Staff argued that a general 40% disallowance is warranted because of DENC's "culpability." Black's Law Dictionary defines "culpable" as "guilty, blameworthy" or "involving the breach of a duty". Black's Law Dictionary (11th ed. 2019). According to this theory, even though no environmental regulatory requirement imposed a duty to remove CCR from unlined impoundments before EPA promulgated the CCR Rule, DENC should, nonetheless, have taken some unspecified actions to address or

prevent environmental impacts to groundwater from the impoundments that posed potential risks to the environment and human health.

The Public Staff's "culpability" theory amounts to a straw man, and evidence offered in support of that theory does constitute evidence satisfying their burden of production. The Commission's role is not to determine culpability or liability for injury to the environment or to receptors of contaminants. Nor is it the Commission's role to assess damages resulting from those injuries. Environmental regulators and courts of general jurisdiction are the appropriate arbitrators of those disputes. *See State ex rel. Utils. Comm'n v. High Rock Lake Ass'n, Inc.*, 37 N.C. App. 138, 245 S.E.2d 787 (1978). The Public Staff has acknowledged the Commission's limitations, as well as its own, in the field of environmental regulation and evaluations of environmental impacts, both prospectively and after-the-fact. (Tr. Vol. 6 at 285-86.)

DENC's unlined impoundments at issue were operated pursuant to environmental permits as wastewater treatment facilities by VA DEQ, WV DEP or their predecessors. Those agencies' statutory mandate is environmental protection and would be the agency to rectify "culpability" for environmental degradation, if any, such as that advocated by the Public Staff in this case. The issue before this economic regulatory tribunal is imprudence – who should bear the compliance costs - the utility's stockholders or its consumers and on the basis of what justification.

The theory of "culpability" relied upon by the Public Staff is incompatible with the "reasonable and prudent" standard. The "reasonable and prudent" standard ensures fairness by requiring that utilities be put on notice of *specific* instances of alleged imprudence – not generalized criticisms. Public Staff Witness Lucas could not identify

any specific actions or costs that DENC should or could have taken prior to 2016. (Tr. Vol. 6 at 294) ("That would be too speculative. We can't go back in time and determine certain actions and certain costs."). Without record evidence from parties advocating disallowances for failure to take CCR remediation steps prior to 2016 of what action DENC should have taken, when it should have acted, and what the costs would have been (Tr. Vol. 6, p. 297), the Commission cannot approve such specific disallowances. Relying on imprecision to support arbitrary percentage disallowances to July 1, 2016 through June 30, 2019 costs is legally and equitably deficient.

As the Public Staff admitted, efforts to identify what DENC should have done prior to EPA's CCR Rule, when it should have done so, and what the costs should have been even with the benefit of 20/20 hindsight pose insurmountable obstacles. *Id*. CCR impoundment closure, even under the supervision of state regulatory agencies, is a site-specific undertaking with procedures that have evolved over time and continue to do so. In the absence of federal regulatory standards and guidelines to follow, no one can say what the prudent course would have been even if one acts on the assumption that DENC was imprudent to await promulgation of the federal environmental regulatory requirements. Of course, for the Commission to accept that it was imprudent to await promulgation of federal regulations, the Commission would also have to accept that compliance with state regulators prior to the CCR Rule was also imprudent. It is not the Commission's role to second-guess environmental regulators, at the state level or otherwise, and make value judgments over environmental regulatory regimes.

Under EPA CCR regulations, the prevalent course of action to close ash basins is dewatering, excavation and removal or cap-in-place. DENC chose to close its ash basins

in place at Chesapeake and Chesterfield and chose to consolidate and cap-in-place its basins at Possum Point and Bremo. Yet, the Public Staff has asked the Commission to look backward where the regulatory requirements were not in place and, therefore, unknown and speculate that the Company should have taken actions earlier without any proof that those actions would have avoided unspecified costs that the Company is incurring today. Having failed to even attempt to quantify what those "avoidable" costs would be, the Public Staff's theory is without probative support and must be rejected.

Without any requirement such as the CCR Rule, to close DENC's CCR basins simply because unlined basins posed "potential" threats to the environment, the Public Staff must "pick a date" when, in their opinion, such remediation should have been undertaken. Significantly, however, the Public Staff took no position as to what the remedy would have been or when it would have occurred. Evidence presented by Company Witness Williams demonstrated that DENC, through permitting requirements imposed by its state environmental regulators, did attempt to investigate insofar as possible the extent to which contamination was occurring or had the potential to occur at its CCR surface impoundments and landfills. (Tr. Vol. 7 at 83-86.) We agree with Witness Williams that, absent evidence of actual or probable future contamination presenting a substantial risk to human health or the environment, DENC would have been remiss in spending millions of dollars to close its ash basins, which is now required by the CCR Rule.

As to impoundments where groundwater impacts were occurring or had the potential to occur, remedies far short of complete excavation, such as installing water extraction methods beyond the impoundment to remove water, were available and

arguably would have been employed as a least cost solution absent the CCR Rule. We cannot agree with the Public Staff that state regulators would not have allowed the Company's surface impoundments to remain indefinitely. In fact, the reports cited by Public Staff Witness Lucas from DENC's sites where groundwater impacts were detected support the conclusion that less costly measures would have been employed. At none of those sites did DENC's regulators ever require DENC to close its ash basins, let alone install extraction wells.

We also cannot agree with the Public Staff that DENC had an absolute duty to prevent any and all impacts to groundwater from its CCR impoundments. What the Public Staff appears to be expecting is perfection, and perfection has never been the standard to which utility management decisions are held. Evaluating groundwater impacts is not black and white, and the Public Staff's attempt to portray it as such demonstrates the problem with trying to apply economic regulatory concepts to environmental regulatory issues. Any CCR impoundment or landfill can leak, whether lined or unlined. (Tr. Vol. 7 at 121-122.) Unless CCR contaminants in excess of proscribed levels migrate beyond the site boundaries, no actionable threat occurs. Monitoring wells provide tools to measure migration of potentially harmful constituents.

Determining the number and placement of monitoring wells, not an inexpensive endeavor, is an inexact science. That is why this Commission cannot accept the Public Staff's contention that DENC should have installed comprehensive groundwater monitoring networks at some point in history. Of course, the Public Staff could not say when the Company should have taken such action or what it would have entailed. While additional monitoring wells at DENC's sites may have provided more information to its

regulators who were tasked with evaluating groundwater impacts, there was no evidence presented that additional monitoring was needed or would have avoided any of the costs the Company is seeking in this case. The Company followed the prevalent and cost-effective approach, which was to install monitoring wells iteratively and methodically to best identify harmful groundwater contamination. *See* Company Rebuttal Exhibit JEW-5.

No intervenor has attempted to determine what DENC should have done, when it should have done so, and what the cost should have been prior to the enactment of the CC Rule. Nor has any intervenor attempted to determine how any prior action would have reduced actual 2016 through 2019 costs. DENC actually has incurred these costs in its efforts to comply with the CCR Rule's published standards and requirements undertaken under VA DEQ's and WV DEP's supervision and guidance.

Viewing the Public Staff's disallowance theory from an accounting perspective presents additional complications because its theory gives no recognition to the impact of long-term, ongoing cost recovery for assumed activities taking place in those earlier periods. The Commission authorizes the deferral of cash expenditures associated with ARO obligations and has generally allowed recovery of such expenditures in rates over a five-year amortization period. Closing the CCR sites is a long-term endeavor. DENC began to incur the compliance expenses that are the subject of this case in 2016 and will continue to do so for at least the next fifteen years. Under procedures being followed, the need for cost recovery in rates will likely continue for the next two decades. So, even if, under the Public Staff's theory, DENC should have begun closing its CCR basins at some hypothetical date in the past, DENC would still likely have been incurring CCR

remediation costs during the test year and would have been amortizing CCR remediation costs from prior years. Consequently, even if some level of closure activities had commenced in earlier periods under the Public Staff's unsubstantiated theory, it is not unreasonable to assume that customers paying rates established in this case could very well face the possibility of paying a similar level of CCR costs at this point in time. Theories relied upon to recreate the past based on hypothetical scenarios all depend on guesswork and subjective factual constructs that are beyond the ratemaking standards this Commission must employ.

2. The Commission determines that the Public Staff's criticisms of DENC's historical CCR practices are unfounded – regardless of the cost recovery standard applied.

The vast majority of the Company's costs in this case relate to the closure of its surface impoundments at Bremo, Chesapeake, Chesterfield, and Possum Point. (*See* Confidential Company Exhibit MDM-1.) To support its "equitable sharing" disallowance theory, the Public Staff focused much of its criticism on how DENC historically managed and operated its surface impoundments at those sites. The Public Staff's criticisms, in the view of this Commission, were non-specific, unfounded, clouded by hindsight bias, and, thereby, not supportive of its disallowance theory.

Even if the Public Staff's criticisms of DENC could be construed as a prudency challenge – an interpretation the Public Staff repeatedly disclaimed – the Company offered substantial, competent evidence that its historical CCR management practices have been reasonable and prudent. Company Witness Williams demonstrated that the Company's coal ash management historical practices (i.e., pre-CCR Rule) have generally comported with industry practices and then-applicable regulations. (*See, e.g.*, Tr. Vol. 5 at 85-88.) Witness Williams' testimony on this point was not seriously or credibly

controverted by the Public Staff. The Public Staff did not contend that the Company did not comply with industry standards when it constructed and continued to operate its surface impoundments. The Public Staff Witness Lucas was not able to specify exactly how the Company should have acted differently in managing its coal ash to be consistent with industry, at which sites it should have taken those actions, and how much those actions would have cost the Company. (Tr. Vol. 6 at 290-91.) The Public Staff presented no credible evidence showing DENC's engineering and design of its impoundments was not consistent with industry or regulatory standards. Instead, the Public Staff implied that industry practice was lagging behind and that, as an industry leader, DENC was somehow responsible for that shortfall. (Tr. Vol. 6 at 133.)

The Public Staff has effectively asked the Commission to replace the historical industry and regulatory standards with a new standard. Then, it wants the Commission to apply that new standard to decisions the Company made thirty or more years ago.[7] Even if the Commission was inclined to engage in this type of retroactive regulation, which it is not, Witness Lucas' testimony gives the Commission nothing to work with. Witness Lucas could not articulate what the industry standard should have been, other than to install "comprehensive groundwater monitoring networks." (Tr. Vol. 6 at 175.) The Company disputed Witness Lucas' testimony on this point. Witness Williams testified that its regulators did, in fact, take a comprehensive approach to groundwater monitoring as is reflected in the 1998 VA DEQ Guidance. (Tr. Vol. 7 at 137-140.) The Public Staff offered no evidence that the Company did not monitor groundwater in compliance with the directives of its environmental regulators. We find Witness Williams' testimony to

[7] DENC constructed its last surface impoundment (Pond D) in 1986 at its Possum Point. (Tr. Vol. 6 at 164.)

be more credible on this point. Witness Lucas' testimony is flawed in numerous respects, namely that it contains no specifics as to how the Company's groundwater monitoring program was deficient or to what extent the Company should have taken different actions to monitor groundwater and when. (Tr. Vol. 7 at 78-80.) Witness Lucas also admitted that the Public Staff was not in a position to provide those specifics. (Tr. Vol. 6 at 286-287 (testifying that the Public Staff does not have the authority or expertise to determine the number, location, depth of groundwater monitoring wells at a given site).)

The Commission, in its discretion, declines the Public Staff's proposal to rewrite decades-old industry and regulatory standards. Absent any credible evidence that DENC's design, operation, or construction of its surface impoundments fell below applicable industry or regulatory standards, the Commission finds that the Company's historical CCR practices were reasonable and prudent. This finding is consistent with the Commission's findings in DENC's 2016 rate case order: "[DENC], like many electric utilities in the United States, has for decades generated electricity by burning coal. During those decades, the widely accepted reasonable and prudent method for handling CCRs has been to place them in coal ash landfills or ponds (repositories)." 2016 DENC Rate Order at 60. Based upon similar evidence in the DEP case, the Commission found that "[s]ince the 1950s, standard industry practice at least in the Southeast, has been to deposit in coal ash basins, and such basins were constructed and used at all of the Company's coal-fired generating units." 2018 DEP Rate Order, p. 142; *see also* 2018 DEC Rate Order, p. 267. As discussed further below, even if DENC had installed additional groundwater monitoring wells at some unspecified time in the past, it would be

speculation for the Commission to conclude that those actions would have avoided any of the costs the Company is facing today to close its CCR basins.

With no specifics on what actions the Company should have taken or when, the Public Staff's theory rests on its allegation that the Company and industry did not do enough to modernize CCR management practices. (Tr. Vol. 6 at 144.) Even this conclusory allegation is not supported, since key documents that the Public Staff cited in their testimony to rebut Witness Williams' testimony either support his testimony or are otherwise irrelevant. For example:

- Los Alamos Laboratory Report (1979): "Much of the ash produced by coal ash combustion is discharged into ash ponds. With increasing frequency fly ash and scrubber sludge are being discharged into the same pond." Regardless, the report is focused on "southwestern coal and utilities industries." (Junis Exhibit 6, pp. 5-7 (Docket No. E-7, Sub 1146).)
- EPRI Manual for Upgrading Existing Disposal Facilities (1982): "Perhaps the most important consideration in such circumstances is the determination of whether the site needs to be upgraded at all. The information presented in this manual *presumes* that the "need to upgrade" has already been identified by the reader. However, it should not be presumed that an old site must be upgraded to conform with RCRA." (Junis Exhibit 8, p. 1-2 (Docket No. E-7, Sub 1146) (emphasis added).) The manual also contained limitations stating, "[s]tandards governing the disposal of utility solid wastes are still being developed. EPA is still pursuing field research aimed at quantifying the environmental impact of utility waste disposal. These studies will not be completed for several years, and

the results may show utility solid wastes to be best disposed of as Subtitle D solid wastes. *Decision making within the context of this manual is difficult*." (*Id*. at 1-5 (emphasis added).) This manual has minimal usefulness and relevance for two reasons. First, no "need to upgrade" DENC's surface impoundments was ever identified by the Company or its environmental regulators. (Tr. Vol. 7 at 114-15.) Second, absent an identified need to upgrade and considering the limitations of the manual, including its reference to pending EPA studies and regulatory and scientific uncertainty, it would not have been prudent to take drastic and costly actions to upgrade CCR facilities based on this manual. (*Id*. at 116.)

- EPA Report to Congress (1988) (1988 EPA Report)[8]: This report confirms that the Company's disposal of coal ash in ponds conformed in large measure to industry practice. The report stated, "[n]early 70 percent of all generating units in the U.S. manage their coal combustion wastes on-site…About two-thirds of the on-site facilities are surface impoundments." (1988 EPA Report, p. 4-23.) This report also represents the culmination of EPA's studies, which was referenced in EPRI's manual discussed above. The 1988 EPA Report did not conclude that groundwater contamination due to CCR surface impoundments was widespread or that, when it occurred, it posed a risk to human health or the environment. (Tr. Vol. 7 at 67.) EPA stated, "[a]lthough coal combustion waste leachate has the potential to migrate from the disposal area, the actual potential for exposure of human and ecological populations is likely to be limited." EPA also concluded

[8] Judicial notice of the full report was taken at the hearing on September 25, 2019. (Tr. Vol. 8, pp. 76-77.) The full report is available at https://www.epa.gov/sites/production/files/2015-08/documents/coal-rtc.pdf.

that "current waste management practices appear to be adequate for protection of human health and the environment." (1988 EPA Report at 5-96 – 5-97.) Based on the EPA's findings and conclusions, DENC would have been justified in incurring enormous costs to overhaul its CCR management practices by ceasing the use of unlined impoundments or retrofitting those impoundments with liners. (Tr. Vol. 7 at 67.)

- EPRI Decommissioning Handbook (2004)[9]: EPRI developed this handbook to assist utilities that were planning to permanently retire or decommission coal-fired power plants. However, at the time this handbook was published, DENC was not planning to decommission or retire any of its coal-fired plants. (Tr. Vol. 5 at 130-32.) Further, there was no intent by the Company to sell coal-fired plant property or otherwise develop it, which was a primary consideration of the handbook.

Later EPA reports that the Public Staff did not cite to in their testimony, but which were pointed out to the Commission by Witness Williams, also do not support the Public Staff's contention. For example:

- EPA Regulatory Determination (1993) (1993 EPA Determination): Following the 1988 EPA Report, EPA published its final regulatory determination of how CCR should be regulated under RCRA (hazardous or non-hazardous). (Tr. Vol. 7 at 68.) As part of the 1993 EPA Determination, EPA addressed whether the electric utility industry should eliminate surface impoundments altogether. EPA concluded, "[a]lthough groundwater contamination has occurred at certain coal combustion waste sites, contamination has been due to a limited number of

[9] Judicial notice of the full report was taken at the hearing on September 25, 2019. (Tr. Vol. 8 at 76-77.)

constituents, which are likely to attenuate and dilute to safe levels before reaching an exposure point…It is therefore appropriate to allow the States to retain the flexibility to tailor requirements to site-specific or regional factors rather than establish broad Federal minimum requirements." (Tr. Vol. 7 at 69.) Further, EPA concluded that it would be inappropriate to subject surface impoundments to specific liner and monitoring requirements, and instead allow states to tailor controls to meet site or region specific risks… "[T]he current State approach to regulation is thus appropriate." (Tr. Vol. 7 at 69-70.) The 1993 EPA Determination supports DENC's decision to follow the directives of its State environmental regulators, which allowed the Company to continue to operate its unlined surface impoundments and did not require DENC to retrofit those impoundments with liners.

- EPA Report to Congress (1999) (1999 EPA Report): In 1999, EPA submitted another report to Congress discussing CCR management practices and whether Federal regulatory action was needed. Similar to the 1988 EPA Report and the 1993 EPA Determination, EPA again concluded that "[c]urrent management practices and trends and existing state and federal authorities appear adequate for protection of human health and the environment." (Public Staff – Williams Cross Ex. 2, p. 3-5.) As to the question of whether unlined surface impoundments should be retrofitted or closed, EPA concluded it "was unable to identify any feasible risk mitigation practices for these very large impoundments other than to continue to rely on the Clean Water Act new source standards to move the industry toward dry handling of the coal combustion wastes…Outright

elimination of the large impoundments would impose extremely high costs on the operators. The benefits to be derived from elimination of impoundments are uncertain due to unavailability of information on actual receptor exposure rates and impacts…" (*Id*. at 3-6.)

- EPA Regulatory Determination (2000) (2000 EPA Determination): In 2000, EPA once again concluded that CCR should not be regulated as hazardous waste, thus deferring to the states to determine the need for mitigation controls on CCR impoundments and landfills. (Tr. Vol. 7 at 71-72; Company Rebuttal Ex. JEW-4.) While other states were lagging behind, West Virginia and Virginia had improved their programs to advance CCR management practices and mitigates potential risks. (*Id*.)
- Proposed CCR Rule (2010): It was not until 2010, which coincided with the Tennessee Valley Authority coal ash dam failure, that EPA first proposed overarching federal rules to govern to disposal and storage of CCR. (Tr. Vol. 7 at 72.) The proposal contained three regulatory options, which ranged from allowing the continued operation of unlined impoundments to the complete excavation of all impoundments. (*Id*.) Many states and regulatory agencies, including the Public Staff, argued that EPA should leave regulation of CCR to state environmental regulators. (*Id*.) Until the final CCR Rule was promulgated in 2014, the actions utilities would have to take and, even more so, the costs of those actions were uncertain. (*Id*.)

The Commission finds that DENC appropriately responded to advances in industry practices for managing CCR. The 1988 EPA Report indicated, "until recently, most

surface impoundments and landfills used for utility waste management have been simple unlined systems," and that "liner use has been increasing in recent years." (1988 EPA Report, p. 4-33.) Consistent with these industry practices, DENC constructed its last unlined surface impoundment in 1985 and its last impoundment overall in 1986, which was lined. (Tr. Vol. 6 at 164.) When newer coal-fired generation units, with dry ash handling capabilities, were brought on-line, the Company appropriately constructed landfills to handle the dry ash produced from these units. This evidence indicates that the Company was evolving its CCR management practices consistent with the rest of the industry.

Further, the Commission finds that DENC's continued use of surface impoundments, including its unlined impoundments, was reasonable and prudent. Use of these impoundments was needed to store CCR generated from DENC's older coal-fired units that were still in operation and necessary to provide reliable and continuous electric service to DENC's customers. DENC was authorized by its environmental regulators, through NPDES permits, to continue to use these impoundments to manage wastewater containing sluiced CCR.

During cross examination, Witness Lucas listed options that he contended could have prevented groundwater contamination from DENC's surface impoundments, including installation of liners. (Tr. Vol. 6 at 293.) However, he was not willing to say that the Company should have taken any of those specific actions or when those actions should have been taken. *Id*. DENC's authorization from VA DEQ to continue operating surface impoundments was conditioned on DENC's compliance with groundwater monitoring requirements. VA DEQ had the authority to require DENC to adopt any of

the options listed by Witness Lucas as well as more drastic measures such as excavation. Based on the environmental data that it received, VA DEQ never required DENC to take any of those remedial measures.

Costly measures, such as retrofitting surface impoundments with liners, are not trivial matters. We agree with Witness Williams that, without an environmental justification to upgrade or retrofit its surface impoundments with liners, leachate collection or other remedial measures, taking such actions would not have been prudent or economically justifiable. (Tr. Vol. 7 at 92-94.)

As discussed above, this Commission does not hold the Company to a standard of perfection. Accordingly, we cannot conclude that DENC had an absolute duty to prevent groundwater impacts or that the exceedances referenced by the Public Staff are evidence of a breach of that duty. All impoundments and landfills – lined and unlined – leak to some degree, so perfection is not even possible in this context.[10] Even if the Company had implemented the options listed by Witness Lucas, the Company would likely have been in the same position that it is today. (Tr. Vol. 7 at 116-17.) A comparison between Possum Point and Bremo is illustrative. Possum Point's Pond D has a liner and a slurry wall. Bremo's ash ponds do not have liners or slurry walls. The groundwater results at Possum Point and Bremo are nearly the same, and the closure method used for both sites will be the same. *Id*. This evidence establishes that DENC's past coal ash management practices did not cause it to incur in the July 1, 2016 through June 30, 2019 timeframe unjustified costs to comply with current laws and regulations. (Tr. Vol. 7 at 81-82.)

[10] Even the CCR Rule contemplates that state-of-the-art composite liners will leak through holes, one per acre, and impact groundwater. Tr. Vol. 7, p. 118.

Second, Witness Williams' and Witness Mitchell's testimony established that the CCR compliance costs were reasonable and prudent. In light of the evidentiary presumptions and shifting burden of production and persuasion, and based on the Commission's assessment of the credibility of the witnesses opining on the facts and policy considerations at issue, the Commission relies heavily on their testimony. Witness Williams and Witness Mitchell's testimonies were credible and demonstrated command of the subject matter. Further, the Commission's conclusion is supported by the fact that no intervenor took exception to any CCR compliance cost presented by the Company.

Company Witnesses Williams and Mitchell and their supporting exhibits described the actions and costs expended to facilitate the Company's handling and storage of coal ash, so as to conform to the new legal requirements imposed on the Company resulting from the promulgation of the CCR Rule and accompanying state regulations. DENC is subject to these new legal requirements and must handle and store coal ash in a manner that complies with them.

C. Absent specific findings of imprudence, an "equitable sharing" disallowance is not justified based on the other arguments presented by the Public Staff.

The Public Staff argued that "equitable sharing" is warranted, even in the absence of Witness Lucas' testimony regarding DENC's alleged "culpability." We conclude that the Public Staff's proposed disallowance theory on these grounds is also unsupported and legally deficient.

Witness Maness achieved the sharing in the same manner in which he implemented the Public Staff's 50/50 sharing proposal in the 2018 DEP Case and the Public Staff's 51/49 sharing proposal in the 2018 DEC Case. First, he removed the unamortized coal ash basin closure costs from rate base and, thereby, through that step,

eliminated any return on that unamortized balance. (Tr. Vol. 6 at 222.) The second step was to choose an amortization period that will result in the desired level of "sharing." (Tr. Vol. 6 at 17.) The sharing level that the Public Staff deemed "equitable" in this case is 40% to the Company and 60% to customers. (Tr. Vol. 6 at 235.) Mathematically, that results in a 19-year amortization period (Tr. Vol. 6 at 246); although, when adjusted for the rate of return to which the Company and the Public Staff agreed, subject to the Commission's approval, was appropriate in this case, the amortization period is reduced to 18 years. (Tr. Vol. 6 at 246.) Even under the 18-year amortization period, however, the sharing level remains at approximately 40% to the Company and 60% to customers. (Tr. Vol. 6 at 247.)

The Commission chose not to accept the "equitable sharing" concept in the 2018 DEP and DEC Rate Cases and does so again on the same basis. First, as discussed above, the concept is standard-less, and, therefore, from the Commission's view arbitrary for purposes of disallowing identifiable costs – there is no rationale that supports a substantially large 40% disallowance. The Public Staff chose a desirable equitable sharing ratio, then backed into the mechanism to achieve that level of disallowance, leaving the allocation subject to an arbitrary and capricious attack, particularly as it provides no explanation as to why the "equitable" split for DEP was, in its view, 50/50 and 51/49 for DEC, while the "equitable" split in this case is 60/40. The Public Staff provided insufficient justification for 60/40 split as opposed to 70/30 or 80/20. *See* 2018 DEP Rate Order, p. 189; 2018 DEC Rate Order, p. 273.

The General Assembly has delegated the Commission the authority to establish rates that are "just and reasonable." N.C. Gen. Stat. § 62-131. When establishing rates,

"[t]he Commission shall consider all other material facts of record that will enable it to determine what are reasonable and just rates." N.C. Gen. Stat. § 62-133(d). When the General Assembly delegates legislative authority to an administrative body, such legislation must be "accompanied by adequate guiding standards to govern the exercise of the delegated powers." *Adams v. N.C. Dep't of Natural & Econ. Res*., 295 N.C. 683, 697, 249 S.E.2d 402, 410 (1978). Otherwise, the legislation is unconstitutional as a violation of separation of powers. *Id*. at 696-98, 249 S.E.2d at 410-11. Therefore, N.C. Gen. Stat. § 62-133(d) cannot be interpreted to provide the Commission with unfettered discretion to disallow prudently incurred costs.

Black's Law Dictionary defines an "arbitrary and capricious" decision as one which, inter alia, is "without determining principle." *See Tate Terrace Realty Investors, Inc. v. Currituck Cty.*, 127 N.C. App. 212, 222-23, 488 S.E.2d 845, 851 (1997). The Commission can discern no "determining principle" in the Public Staff's "equitable sharing" proposal. As such, were the Commission to adopt it, the Commission's action would be subject to an arbitrary and capricious attack and likely subject itself to reversal. An illustrative case is *Sanchez v. Town of Beaufort*, 211 N.C. App. 574, 710 S.E.2d 350, *disc. review denied*, 365 N.C. 349, 718 S.E.2d 152 (2011), in which the Court held that it was arbitrary and capricious for a municipal body to "cherry pick" a standard without providing any basis of any particular determining principle. *Sanchez*, 211 N.C. App. at 580, 710 S.E.2d at 354.

In that case, the Beaufort Historic Preservation Commission (BHPC) attempted to limit the construction of the petitioner's home to 24 feet in height "without the use of any determining principle from the BHPC guidelines." *Id.* at 582, 710 S.E.2d at 355. Rather,

the BHPC members based the standard "on their own personal preferences," with each member providing a manner of re-working the project's construction to comply with a 24-foot height maximum, but none providing a reason as to why 24 feet when the height "could be a different number ...." *Id*. at 581 (emphasis in original). Thus, while the BHPC members could provide a way to arrive at the height maximum, they could not provide a "why" for that particular height maximum. Failure to provide a determining principle for the height maximum itself rendered the BHPC's decision arbitrary and capricious. *Id*. at 582.

Ultimately, the Public Staff, through Witness Maness, indicated that "what is and what is not allowed in rate base is within the legal discretion of the Commission to decide." (Tr. Vol. 6 at 223.) The Public Staff overstated the Commission's discretion, and to the extent the Commission possesses such discretion, the Commission chooses not to exercise it in the manner the Public Staff advocated. To understand exactly how, it is necessary first to examine the Public Staff's purported rationales for its sharing proposal. There are two: first, the Company's alleged past failures, as detailed in the testimony of Public Staff Witness Lucas, to prevent environmental contamination from its coal ash basins, and, second, an asserted "history of approval of sharing of extremely large costs that do not result in any new generation of electricity for customers." (Tr. Vol. 6 at 219.)

As to the first asserted predicate, and as discussed fully above, the Company disputes such "failures," as set out in the testimony of Company Witness Williams. The Commission credits Witness Williams' testimony, as detailed below; however, whether or not the Company was guilty of or culpable for groundwater impacts is insufficient to justify the Public Staff's 60/40 sharing proposal. Witness Maness admitted that these

alleged acts or failures to act are related to past operations. (Tr. Vol. 6 at 218-19.) No persuasive evidence exists that any of these actions or inactions caused discrete expenditures by the Company to comply with its CCR Rule and state law obligations, which are the costs that the Company seeks to recover. Past actions, even if imprudent in this context must result in quantifiable costs, which the Public Staff has not shown. Therefore, identification of an imprudent action or inaction is not by itself sufficient; rather, there must be a demonstration of the economic impact. 1988 DEP Rate Order at 15. The Public Staff has made no such demonstration in this case, and no such demonstration with respect to the Public Staff's 60/40 sharing arrangement. Witness Lucas' testimony did not link the past actions of the Company to the present-day costs it seeks to recover. The Commission agrees with this distinction. In keeping with its decision in the 1988 DEP Rate Order, this aspect of which was affirmed by the North Carolina Supreme Court, to permit disallowance there must an actual expenditure shown to be imprudently incurred.

The Public Staff's position, simply stated, was that it does not matter if the Company's actions in incurring the CCR Rule and state law compliance costs were prudent – the Public Staff's equitable sharing proposal would still apply. As Witness Maness testified, "[w]hether or not some specific disallowances of imprudently incurred or otherwise unreasonable costs are made" (Tr. Vol. 6 at 220), the Public Staff would still find it "appropriate to consider equitable sharing . . . for the remainder of a particular body of costs not specifically found to be imprudent or unreasonable." (*Id.*) Accordingly, the predominant rationale for the Public Staff's proposal is Witness Maness' second predicate: the proposition that the Commission has a "history of approval

of sharing of extremely large costs that do not result in any new generation of electricity for customers." (Tr. Vol. 6 at 219.)

Witness Maness overstated his position. As Witness McLeod noted, there is "no provision of Chapter 62 requiring different treatment for 'extremely large costs'" (Tr. Vol. 6 at 683-84), and Witness McLeod detailed any number of "extremely large cost" items not associated with new generation for which cost recovery is routinely allowed. (*Id*.). The Commission determines that this is another example of the arbitrariness inherent in the Public Staff's sharing proposal.

It appears that Witness Maness' rationale for the sharing proposal is grounded in the Public Staff's view of the discretion available to the Commission. He stated first that pursuant to N.C. Gen. Stat. § 62-133(b)(1), and with the exception of construction work in progress under certain circumstances, "the only costs that the Commission is required to include in rate base are … the 'reasonable original cost of the public utility's property used and useful, or to be used and useful within a reasonable time after the test period ….'" (Tr. Vol. 6 at 223.) He indicated that he is advised by counsel that "beyond these requirements what is and what is not in rate base is fully within the Commission's discretion to decide, as long as the rates set thereby are fair and reasonable to both the utility and the consumers." (*Id*.)

DENC and the Public Staff stridently debated whether the 2016 through 2019 CCR compliance costs, if found used and useful and otherwise meet the test for amortization with a return on the unamortized balance, "must" or "may" be approved. The Public Staff argued that approval of a return is discretionary. The Commission determines it is unnecessary to determine whether the costs must receive a return on the

unamortized balance. In its discretion, as expressly authorized by N.C. Gen. Stat. § 62-133(d), with the exception addressed below, it approves a return.

DENC argued that, deferred, its July 1, 2016 through June 30, 2019 CCR compliance costs accounted for in an ARO, as authorized by the Commission in its 2016 order, should be amortized over five years and should earn a return on the unamortized balance. The Public Staff argued that these ARO costs should be amortized over 18 years with no return based primarily on an equitable sharing theory. In support of these parties' contrasting positions and in order to challenge the merits of their opposition, the parties laboriously debated issues of used and useful, "entitled" versus "eligible" for earning a return, plant-in-service versus working capital, capital costs versus expenses, etc. The parties arduously debated the applicability to this issue of cases addressing an abandoned sewage treatment plant, costs of discontinued nuclear projects, and manufactured natural gas remediation costs.

No witness argued that the Commission lacks the discretion to follow the precedent it established in the two previous cases, DEC and DEP, where it addressed the issue of amortizing deferred ARO CCR costs over five years and a return on the unamortized balance. No witness argued that the law forbids the Commission to authorize a return on the unamortized balance. The Commission chooses to exercise its discretion and authority under N.C. Gen. Stat. § 62-133(d) and follow its precedent here – amortize the ARO costs over five years and authorize a return on the unamortized balance. The Commission will address the lengthy arguments and debate but determines that, by and large, the arguments are not particularly germane or dispositive to the Commission's decisions. The Commission will not accept the Public Staff's equitable

sharing argument primarily because the Commission determines, in its discretion, that amortization of the deferred ARO costs over 18 years is inequitable and finds inadequate support for a 60/40 sharing versus some other ratio. The justification for disallowance of 40% of the ARO costs is not persuasive. The Commission concludes that the Public Staff relied on the equitable sharing principle because it has been unable to quantify a disallowance on the basis of the alleged DENC acts and omissions prior to 2016 providing the predicate for the requested disallowance.

While arguments by the parties through analogy to cases on other issues provide some helpful context, the issue of amortization of deferred costs to comply with EPA's CCR requirements and state law is *sui generis* and distinguishable. These expenditures, as FERC and GAAP refer to them, are "costs" or an "asset" of remediation. They have been deemed by the Commission without objection as extraordinary, as not being recovered through current rates and have for those reasons been deferred. As such, they are investor-supplied funds, not ratepayer-supplied funds and under principles of equity, law and fairness are eligible for a return. Otherwise, the investor supplying these funds is deprived of the time value of money and is inadequately compensated resulting in an increased risk and, ultimately, increasing the Company's cost of capital. The Commission, in its discretion, hereby authorizes a return.

The nuclear discontinued plant costs, to the extent relevant to the issues in this case, are primarily so with respect to the Public Staff's argument in support of equitable sharing. The Commission determines on balance that the support for equitable sharing that the Public Staff argues these cases provide is unpersuasive. This is not to say that the Commission is of the opinion it could not approve an equitable sharing remedy in a given

case outside the context of a nuclear plant discontinuance case, but this is not a nuclear plant discontinuance case, nor is it one the Commission chooses to rely upon to authorize equitable sharing. The costs the electric utilities incurred at issue in those cases were for nuclear plants that, had they been placed on line and generated electricity, would have been added to rate base as used and useful plant–in-service. Some of the costs were for plants actually placed on line but sized to serve more units than the units actually generating electricity and, therefore, constituted excess capacity or plant not "useful." The costs had never been placed in rate base as plant-in-service prior to the general rate cases at issue; and, to the extent they were costs in abandoned nuclear facilities, they were facilities never used to generate electricity. Those are not the facts at issue here. None of the nuclear plant discontinuance cases, either before the Commission or the courts on appeal, held that to the extent a portion of the costs could be recovered, they were ineligible for any return on the undepreciated balance, just that the costs should not be added to rate base. In fact, in the past, the Commission has approved a return. Order dated September 24, 1982, Docket No. E-2, Sub 444 (authorizing recovery of costs associated with cancelled Harris Units 3 and 4 over a ten-year period with inclusion of the interest arising from the debt financing portion of the unamortized balance).

The costs of the sewage treatment plant at issue in Carolina Water were classified as abandoned plant. The plant, long having been in service, had been taken out of service, and it would never be used again because service would be provided by contract with a governmental agency. A portion of the original costs to build the plant had not been recovered through depreciation at the time of abandonment. That is not the factual situation in this case. Here, there is a deferral of ARO CCR remediation costs. New

costs were incurred in 2016-2019 in addition to creation or maintenance of the impoundment in prior years.[11]

The MFG case is somewhat analogous but does not address billions of dollars of CCR remediation costs incurred to comply with EPA and state law requirements accounted for in a deferred Commission-approved ARO. The Commission is unable to discern whether the natural gas utility was required to construct lined landfills in which to place contaminated materials or construct caps over any existing repositories. The MFG case was a Commission decision, one the Commission may follow or not as it determines appropriate. For reasons fully explained herein, it determines not to follow it.

As to Public Staff arguments that the ARO costs or assets were all "capitalized expenses," the Commission, were it necessary to resolve this issue, would disagree. For example, a significant portion of the costs compiled in the asset retirement obligation has been spent towards preparing sites for installing impermeable caps over existing impoundments. Under SB 1355, DENC will be excavating its existing impoundments, which may require the construction of lined landfills with synthetic liners. These structures are examples of long-lived assets and are capital in nature- not expenses. Another significant portion, had they not been accounted for in an ARO and deferred,

[11] The issues of earning on the abandoned wastewater treatment plant was not the major issue before the Court in the Carolina Water case. The ultimate issue before the Commission was whether the unrecovered costs of the sewage treatment plant should be treated as plant held for future use of abandoned plant. Discussion of this issue consisted of less than two pages in a 126-page order. The monetary consequences amounted to a few thousand dollars per year. Docket No. W-354, Sub 111, Order dated July 31, 1992, pp. 56-58. The facts at issue in the case are unlikely to be repeated. Under the Uniform System of Accounts, the costs of individual components, in many instances, are combined into classes for calculating depreciation rates and net salvage value. Within these classes many individual components retire before or after the end of their projected useful lives. These retirements affect the recalculated depreciation rates, but the individual components are not classified as abandoned plant. *See* 2018 DEC Rate Order at 277, n. 65.

would have been operating or other expenses.[12] However, while expenditure of costs outside of the ARO context that are deferred may include what otherwise would be classified as "expenses," e.g., operating costs, when they are capitalized and by order of the Commission are deferred, they lose for ratemaking purposes the attributes of test year recurring "expenses" deemed recoverable through the rates then in effect that do not qualify for a return. To the extent they qualify for recovery "of" (versus recovery "on") test year expenses in a general rate case through N.C. Gen. Stat. § 62-133(b)(3), they are recoverable as "actual investment currently consumed through reasonable actual depreciation" (amortization) rather than traditional test year, recurring "reasonable operating expenses." The Commission determines that, while *sui generis*, these ARO costs in totality are more closely related to deferred production plant costs than deferred storm damage costs, for example.

When the CCR basins at issue in this matter were constructed, they were capital assets "used and useful" in the provision of service to customers – their function was to store CCR, a byproduct of the generation of electricity. In DENC's 2016 rate case, the Commission concluded that "the current CCR repositories are and have served their purpose of storing CCR[] for many years. In that respect, they have been used and useful for DNCP's ratepayers. However, pursuant to the CCR Final Rule, DNCP must incur expenses to the existing repositories for environmental remediation…The result of [DENC]'s efforts should be the expenditure of funds to establish permanent CCR storage

[12] Calendar year 2018 is the twelve month test year in this case. To the extent the Commission had not authorized deferral of the ARO in 2016, the non-capital portion of the CCR remediation costs to the extent reasonable and prudent would be recoverable dollar-for-dollar in the revenue requirement. The portion spent on capital projects to the extent comprising completed projects would be added to rate base and eligible to earn a return.

repositories. Like the existing CCR repositories, these permanent storage repositories will be used and useful for [DENC]'s ratepayers." 2016 DENC Rate Order at 61.

The Public Staff argued that under either the *Thornburg I* holding or the Carolina Water Service holding, there is no DENC entitlement to a return on the unamortized balance of its deferred coal ash costs. The Commission finds the contention inaccurate that the cited cases deny the Commission's discretion to authorize a return on a deferred CCR remediation ARO. The nuclear plant discontinuance costs at issue in *Thornburg I* were not "deferred operating expenses" like deferred CCR ARO costs, and the abandoned water treatment plant costs at issue in Carolina Water, likewise, were not deferred "regulatory asset" costs comparable to either deferred nuclear plant discontinuance costs or deferred CCR ARO costs.[13] The Commission notes that it has authorized deferral of capital costs in utility plant (e.g., combined cycle natural gas fired electric generating plants) completed and placed in service prior to the test year or prior to the end of the test year of a general rate case to prevent loss of recovery of costs. The costs so deferred are not test year recurring operating expenses but deferred capital costs, added to rate base and eligible for a full return. A used and useful analysis is appropriate to determine recovery of these costs. Docket No. E-22, Sub 532 (Dec. 22, 2016) ("2016 DENC Rate Order").

The Public Staff also argued inaccurately and misleadingly that "it generally makes no regulatory sense to defer to a regulatory asset a cost that could be placed in rate

[13] While the regulatory accounting concepts of creation of a "regulatory asset/liability" and "deferral" include a wide spectrum of cost categories, this Commission views differently costs incurred before the test year of a general rate case (like extraordinary storm costs) and costs otherwise recognizable as test year costs or expenses but deferred for non-traditional future recovery such as nuclear plant discontinuance costs that are not added to rate base but are nonetheless amortized over future years. Costs in the former category are deferred to prevent loss of recovery. Costs in the latter category generally are deferred to limit, reduce or postpone recovery.

base – deferral is used when necessary to prevent significant erosion of earnings, which is applicable to expenses but not to property that can be put in rate base; . . . ." In the Commission's order in DENC's 2016 general rate case, the Commission approved a stipulation between the Company and the Public Staff to defer the post-in-service costs of the Warren County CC and the Brunswick County CC. These plant-in-service electric production assets had been placed in service prior to the end of the general rate case test year, and the deferral postponed the date on which depreciation costs began and permitted return on the full costs of the assets. This deferral related to property, not expenses.

From the outset, the Public Staff has acknowledged and recognized that the ARO costs do not fit into traditional categories: "The Public Staff believed that the non-capital costs and depreciation expense related to compliance with state and federal requirements ... these very unique deferred expenses . . . the unusual circumstances of these costs . . . the unique nature of the costs and the complexity of the issues surrounding the determination of ultimate rate recovery." (Tr. Vol. 18 at 300-01 (Docket No. E-2, Sub 1142).)

In Docket No. E-2, Sub 1142, Witness Maness was asked why certain ARO capital costs were not appropriately classified as used and useful.

> Q. Just to be clear, one of the things we are doing -- we showed it up on the screen here yesterday - we are putting liners under these coal ash pits, right?
>
> A. Yes, sir.
>
> Q. And that's - and we are putting caps or proposing to put caps over some coal ash basins?
>
> A. Yes.

> Q. Isn't that used and useful expenditure to keep the coal ash where it belongs?
>
> A. Well, that raises a number of interesting questions, and I can't pretend to be able to answer them in detail. I have been searching for some answers in the accounting literature and haven't found anything direct yet.

(Tr. Vol. 19 at 65-66 (Docket No. E-2, Sub 1142).)

Upon being questioned and when given the opportunity to support its position that the deferred ARO costs are "expenses," the Public Staff simply was unable to do so. When Witness Maness was asked whether classifying the ARO costs as used and useful made any difference to the outcome of the case, he responded, "I don't think it makes any difference in this case." (Tr. Vol. 19 at 66.) The Commission agrees.

As expressed through Witness Maness' testimony, the Public Staff looked to the Commission's Order Granting Partial Increase in Rates and Charges in Docket No. E-2, Sub 526 (Aug. 27, 1987) (1987 DEP Rate Order) and its affirmance by the Supreme Court in *Thornburg I*, 325 N.C. 463, 385 S.E.2d 451 (1989) as precedent for its equitable sharing concept. The Commission determines that *Thornburg I* provides less support for the equitable sharing the Public Staff advocates when viewed within the context of other cases addressing nuclear plant discontinuance costs. Greater context is found in *Thornburg II*, the 1988 DEP Rate Order and the Commission's Order Denying Motions for Reconsideration in the 1988 DEP Rate Case (Docket No. E-2, Sub 537) (1988 DEP Reconsideration Order), and the Supreme Court's reversal in part of those orders in *Thornburg II*, 325 N.C. 484, 385 S.E.2d 463 (1989).

The principal issue in the 1987 DEP Rate Case/*Thornburg I* was whether the Company could recover in rates any portion of the costs associated with the abandoned Units 2, 3, and 4 of the Shearon Harris nuclear plant. The Commission had previously

decided that the Company could amortize the costs associated with these abandoned units over a ten-year period, but that "no ratemaking treatment should be allowed which would have the effect of allowing … [the Company] to earn a return on the unamortized balance." 1987 DEP Rate Order, p. 61. Over the objections of the AGO, the Commission decided to continue to follow that process in the 1987 case – it allowed amortization of abandonment costs over a ten-year period, what the court classified as an operating expense[14] for the purposes of rate recovery under N.C. Gen. Stat. §§ 62-133(b)(3) and 62-133(c), but no return. The Supreme Court, in a passage extensively quoted in Witness Maness' testimony (Tr. Vol. 6 at 227-28), affirmed the Commission's decision, holding that N.C. Gen. Stat. §§ 62-133(b)(3) and 62-133(c) were elastic enough to include non-recurring abandonment costs as utility test year "expense," and that N.C. Gen. Stat. § 62-133(d), which allows the Commission to factor in "all other material facts of record that will enable it to determine what are just and reasonable rates," also provided support for the Commission's decision. The Court further held that, as a matter of policy, a return of but not a return on the abandonment costs was appropriate. *Thornburg I*, 325 N.C. at 476-81, 385 S.E.2d at 458-61. The Commission had not authorized a return on the costs at issue. The contested issue was recovery of, not recovery on, the nuclear investment costs.

In *Thornburg I*, the Court held specifically that the Commission's recovery of but no return on decision was "within the Commission's discretion" and would not be

[14] While the Court's use of the term "operating expense" is technically correct as referenced in the statute, the more precise term should have been "actual investment currently consumed through reasonable actual depreciation" (amortization) in N.C. Gen. Stat. § 62-133(b)(3). The costs at issue were not recurring operating and maintenance or other "expenses" expended in the test year. They were ever decreasing costs allowing a "return of," but not a "return on" the nuclear plant costs.

disturbed. *Id.* at 481. That decision effected a "sharing" between the Company's shareholders, on the one hand, and its customers, on the other – shareholders received a return of the costs but no return on the costs. It is based upon this holding that the Public Staff, through Witness Maness' testimony, contends that "reasonable rates can include a sharing between ratepayers and investors with regard to plant cancellation costs" (Tr. Vol. 6 at 226), and that the Commission possesses discretion to implement this sharing.

There are, however, distinctions between the 1987 DEP Rate Case/*Thornburg I* and the present case. First, this case does not involve "abandoned plant" or cancellation costs. Rather, it involves an asset retirement obligation and whether or not the unamortized balance is eligible for a return. As such, the authority that the Public Staff relied upon to support its "equitable sharing" concept is not directly on point. This is illustrated by examining the prior orders of this Commission and the subsequent Thornburg case: the 1988 DEP Rate Order, the 1988 DEP Reconsideration Order, and *Thornburg II*.

In the 1988 DEP Rate Case, the principal issue for decision was the reasonableness and prudence of the costs of constructing and placing into service Unit 1 of the Shearon Harris nuclear plant. The Commission found that, for the most part, Harris Unit 1 costs were reasonable and prudent and that determination in the 1988 DEP Rate Order was upheld by the Supreme Court. *Thornburg II*, 325 N.C. at 488-89, 385 S.E.2d at 465-66 (finding "no error" in that part of the Commission's Order). However, a part – $570 million-worth – of the costs the Commission considered were incurred in connection with facilities to be shared with Units 2, 3, and 4, units that the Company had ceased to construct to completion. The Commission found that while these $570 million

in costs were prudently incurred, they should be shared between the Company's customers and its shareholders. The Commission found that approximately $180 million of those costs were properly classified as "abandonment" costs and should be borne by shareholders. 1 988 DEP Rate Order, pp. 112-14. The remaining $390 million were left in rate base.

Responding to the Public Staff's request that the Commission reconsider this decision and remove the entire $570 million from rate base on the grounds that all of it related to abandoned plant, the Commission reaffirmed its decision in the 1988 DEP Reconsideration Order and provided additional explanation for its ruling. It stated that the Public Staff's request that the full $570 million for the common facilities be treated as abandonment costs was based upon a "misunderstanding" of the 1988 DEP Rate Order and the Commission's objective in splitting this $570 million item into $390 million of rate base and $180 million of cancellation costs. 1988 DEP Reconsideration Order at 2-3.

The Commission did not (it says in the 1988 DEP Reconsideration Order) intend to treat the "excess common facilities" as abandoned plant; rather, it effected an "equitable sharing" (emphasis added) of the $570 million between customers and shareholders. The Commission reiterated that the Company's choice of the cluster design – which engendered the shared facilities – was reasonable and prudent and that, except as specifically indicated in the 1988 DEP Rate Order, the costs of the Shearon Harris plant were "reasonable and prudently incurred." Thus, the Commission found, the $570 million at issue was also reasonably and prudently incurred. Nevertheless, the Commission held that it was appropriate to share the $570 million at issue, and it

indicated that it came up with the allocation (essentially one-third to cancellation costs and two-thirds to rate base) on its own and adopted it "for reasons of fairness and equity." *Id.* at 4-5. The Commission held that it continued "to believe that a reasonable and equitable apportionment of the burden and risks associated with … [the Company's] prudent investment in common facilities is appropriate." It stated further that its assignment of $180 million as the value of the Company's prudent investment in common facilities to be treated as cancellation costs for ratemaking purposes was an appropriate exercise of its "regulatory discretion." *Id.*

The Supreme Court disagreed. It held that the Commission did not have the discretionary power to effectuate its "equitable sharing" decision. Rather, the facilities were either "used and useful," and, therefore, in rate base or they were not. The Court looked to the Commission's finding that the facilities in question were "excess common facilities," and held that "excess" facilities were not "used and useful" as a matter of law. *Thornburg II*, 325 N.C. at 495. Accordingly, looking to the broader spectrum of Commission and Supreme Court precedent, the Commission determines not to approve the Public Staff's "equitable sharing" concept through reliance on the nuclear plant discontinuance cost cases.

The Commission finds that the costs are known and measurable, were reasonably and prudently incurred, and are used and useful in the provision of service to customers. The Commission determines the costs were properly deferred. As such, with the exception noted below, they are recoverable from customers. The issue that remains is the amortization period over which this recovery is to be made. The Commission deems the Company's proposal, which submits that the amortization period should be five years,

to be reasonable and appropriate. The Public Staff, in its 60/40 "equitable sharing" proposal, suggests a period of 18 years (with no return), but its suggestion is tied to (indeed, mathematically required by) the sharing arrangement. As discussed above, the Commission determines that the Public Staff's sharing proposal is, from the Commission's perspective, arbitrary and unfairly punitive and therefore unacceptable. Thus, an 18-year, no return amortization period is not approved. The five-year period suggested by the Company is identical to the period over which the Commission approved in DENC's 2016 Rate Case, as well as the period over which DEP's (Docket No. E-2, Sub 1142) and DEC's (Docket No. E-7, Sub 1146) already-incurred coal ash basin closure costs were amortized. Further, inasmuch as the Company appropriately applied ARO accounting, the Company is eligible to earn a return. In summary, DENC has shown by the greater weight of the evidence that its CCR closure expenses actually incurred over the period from July 1, 2016 through June 30, 2019 are (a) known and measurable, (b) reasonable and prudent, and (c) used and useful, and, as such, those costs are recoverable in rates. DENC has further shown that its proposal that these costs be amortized over five years, with a return on the unamortized balance, positions the Company's current rate structure to recover these costs over a reasonable amount of time.

IT IS, THEREFORE, ORDERED as follows:

1. That DENC shall recover the actual CCR environmental compliance costs DENC has incurred during the period from July 1, 2016 through June 30, 2019, in the amount of $21.8 million. These costs shall be amortized over a five-year period, with a return on the unamortized balance at the overall rate of return approved in this Order.

2. That DENC is authorized to record its July 1, 2019 and future CCR costs in a deferred account until its next general rate case. This deferral will accrue a return at the overall rate of return approved in this Order.

ISSUED BY ORDER OF THE COMMISSION.

This the ____day of _____, 2019.

NORTH CAROLINA UTILITIES COMMISSION

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing *Proposed Order Regarding Contested Issue of Recovery of Coal Combustion Residuals Environmental Compliance Costs*, as filed in Docket Nos. E-22, Subs 562 and 566, was served electronically or via U.S. mail, first-class, postage prepaid, upon all parties of record.

This, the 6th day of November, 2019.

/s/Mary Lynne Grigg
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